

1 **EFFICACY OF JALAUKAVACHARNA IN THE MANAGEMENT OF SIRAJGRANTHI**
2 **W.S.R. TO VARICOSE VEINS: A CASE STUDY.**

3
4 **ABSTRACT**

5 **Introduction:**

6 Varicose veins are dilated, tortuous, and elongated veins in the legs, characterized by the
7 reversal of blood flow due to faulty valves. This condition results in permanently elongated
8 and dilated veins with a tortuous path, leading to pathological circulation. Varicose Veins in
9 *Ayurveda* are clinically correlated with *Sirajgranthi*. Conventional treatments often have
10 limited efficacy and significant side effects, demanding alternative therapies even surgical
11 procedures also. *Jalaukavacharna* in Panchakarma under *Raktamokshana* is a classical
12 therapy indicated in the management of *Sirajgranthi*.

13 **Clinical Findings:**

14 A 53-year-old male presented with pain in medial side of calf region on left side, tortuosity of
15 veins on both legs more on left than on right side, mild swelling, mild itching and mild skin
16 pigmentation.

17
18 **Primary Diagnosis, Interventions and Outcomes:**

19 Based on Ayurvedic assessment and symptomatology, diagnosis was *Sirajgranthi*. 7 Sittings
20 of *Jalaukavacharna* were done after every 5 days interval from Day 0 to Day 31 and last
21 follow up was done on 45th day. Total assessment score decreased markedly from 11 at Day 0
22 to 2 by Day 45 indicating significant clinical improvement. Marked reduction in Tortuosity of
23 dilated veins, pain in bilateral legs and no oedema.

24 **Conclusion:**

25 This case illustrates that *Jalaukavacharna* significantly provided quick and significant relief
26 from *Sirajgranthi* symptoms, particularly in the symptom like *Shoola*, *Daha*, *Shotha* and
27 *Kandu*.

28 **Keywords:** *Sirajgranthi*, *Raktamokshana*, *Jalaukavacharna*, Varicose veins, Leech
29 Therapy.

30 **INTRODUCTION**

31 Graceful, strong legs are often a reflection of vitality and beauty, carrying us through life's
32 daily adventures. Yet, for millions, the appearance of varicose veins can transform this natural
33 elegance into a source of discomfort and concern. These twisted, swollen veins are not just a
34 cosmetic issue—they are a sign of compromised circulation.

35 Varicose veins are dilated, tortuous, and elongated veins in the legs, characterized by the
36 reversal of blood flow due to faulty valves. Risk factors include heredity, female sex,
37 occupations that demand prolonged standing, immobility, raised intra-abdominal pressure such
38 as in sports, tight clothing, pregnancy, raised progesterone level and altered estrogen-

39 progesterone ratio, chronic constipation and high heels.¹Certain jobs demand prolonged
40 standing, such as bus conductors and policemen and individuals in these professions often
41 suffer from varicose veins. It may also occur in people involved in excessive muscular
42 contractions, such as rickshaw pullers and athletes.²

43 In Ayurveda, Varicose Veins can be compared to *Sirajgranthi*. According to *Acharya Sushruta*,
44 it is a condition in which etiological factors like excessive physical exertion by a weak
45 person can aggravate *Vata dosha*, leading to its entry into the veins and causing symptoms like
46 *Sampeedana*, *Sankocha* and *Vishoshana* and produces rounded and protruded *granthi* in the
47 *Siras*.³*Acharya Charaka* has described that *Granthi* occurs in a particular part of the body due
48 to *Vitiated Vata dosha*, and if it gets surrounded by vessels, it pulsates.⁴*Acharya Vagbhata* has
49 explained that *Sirajgranthi* develops in individuals who undergo excessive walking, strenuous
50 physical exercise, or suddenly immerse themselves in cold water immediately after extreme
51 fatigue. These activities aggravate *Vata dosha*, which affects the network of veins along with
52 the blood circulating within them. The aggravated *Vata* compresses, constricts, twists and dries
53 the veins, leading to abnormal tortuosity and obstruction of blood flow. As a result, a nodular
54 swelling or *granthi* is formed in the veins. This swelling is typically non-pulsating and painless
55 in nature.⁵

56 Varicose veins affect approximately 35% of the population, with severe cases comprising about
57 10%. These veins are typically confined to the long and short saphenous systems in around
58 60% and 20% of cases, respectively.⁶Approximately 15% of males and 25% of women have
59 noticeable varicose veins.⁷

60 In modern science, new techniques, facilities are available but treatment procedures available in
61 modern science have many drawbacks and do not provide complete relief to the patient. The
62 main treatment in Ayurveda for varicose veins is *Raktamokshanai.e. Jalaukavacharana*. It is
63 preferred for its simplicity and efficacy.⁸*Jalaukavacharana* is indicated for the removal of
64 localized vitiated *Rakta*, which is also present in the disease of *Sirajgranthi*. In this case study,
65 the efficacy of Ayurveda interventions, *Jalaukavacharana* as explained in classics, has been
66 explored for the management of *Sirajgranthi*.

CASE REPORT

History of Present Illness

A 53-Year-old male patient visited *Panchakarma* OPD with complaint of pain in medial side of calf region on left leg since 20 days, tortuosity of veins on both legs more on left leg than on right leg since 1 year, mild swelling, mild itching and mild skin pigmentation. He also had complaint of burning sensation in the bilateral legs and reported pain reduction while walking but aggravation on standing. Patient sought other opinions as well but opted for *Jalaukavacharna* and then visited this hospital for the same.

Past History: No H/O HTN / DM – II / CAD / Hypothyroidism / Not any major illness

Treatment History: No Treatment History / No Previous Operation Done

Family History: No Relevant Family History

Personal History:

Table No. 1. Personal History

Appetite	Normal
Bowel	Regular
Urine	Normal
Sleep	Good Sound Sleep

General Physical Examination:

Table No. 2: General Physical Examination

Blood Pressure	130/80 mmHg
Pulse Rate	82/min
Temperature	98.3 degrees
Respiration Rate	16/min
Pallor	Absent
Cyanosis	Absent
Edema	Present
Lymphadenopathy	Absent

Systemic Examination:

Table No. 3: Systemic Examination

System	Observation
Respiratory System	• B/L Clear Airway
Gastrointestinal System	• Soft and Non- Tender
Cardiovascular System	• S ₁ S ₂ Heard
Central Nervous System	• Conscious and well oriented to time, place and person.

Dashavidha Pariksha:

Table No. 4Dashavidha Pariksha

<i>Prakriti</i>	<i>Vata – Kaphaj</i>
<i>Vikriti</i>	<i>Tridoshaj</i>
<i>Sara</i>	<i>Madhyama</i>
<i>Samhanana</i>	<i>Madhyama</i>
<i>Pramana</i>	<i>Madhyama</i>
<i>Satmya</i>	<i>Sarvarasa</i>
<i>Satva</i>	<i>Avara</i>

<i>Ahara Shakti</i>	<i>Madhyama</i>
<i>Vyayama Shakti</i>	<i>Avara</i>
<i>Vaya</i>	<i>Madhyama</i>

Institutional ethics committee approval was obtained for the publication of the case report.

INVESTIGATIONS:

CBC, RBS, CT, BT, HIV, HCV, HBsAg and RBS were performed. CBC, RBS, CT, BT were within normal limits and all viral markers were non-reactive.

Treatment Protocol

Jalaukavacharana: The patient was subjected for *Jalaukavacharana*. Patient was advised for weight reduction and avoiding prolonged standing *Jalaukavacharana*. 7 Sittings of *Jalaukavacharna* were done after every 5-day interval from Day 0 to Day 31, and the last follow-up was done on the 45th day. The therapeutic response and progress were monitored through follow-up assessments conducted on the 0th, 10th, 20th, 30th, and 45th Day.

Table No. 5: Daywise Sittings of *Jalaukavacharana*

Day	Sitting
1	1 st
6	2 nd
11	3 rd
16	4 th
21	5 th
26	6 th
31	7 th

Procedure of *Jalaukavacharana*

The procedure of *Jalaukavacharna* is classified into the following three headings:

PoorvaKarma: The procedure was explained to the patient. All pre-procedure investigations, such as CBC, BT, CT, RBS, HIV, HCV, HBsAg, were performed and were found to be within normal limits. Written consent was obtained from the patient. All instruments needed for the procedure were prepared. *Jalaukas* were activated by putting them in turmeric water 30 minutes prior to application.

PradhanaKarma: 4*Jalaukas* in each leg were applied to the most affected place, where the highest tortuosity and discomfort were discovered. *Jalaukas* were applied for around 45 minutes. *Jalaukas* detach spontaneously after sucking the impure blood.

PaschataKarma: *Lodhra Churna* was applied to achieve homeostasis. Proper bandage was applied to prevent post-procedure bleeding. Proper *Vaman* of *Jalaukas* was performed. After

Vaman, Jalaukas were placed in container with label of patient's name and date. The patient was told to keep the leg in the appropriate posture and was encouraged to follow a diet and a regimen.

Criteria for Assessment

Table No. 6 Criteria for Assessment

Parameter Type	Grade	Explanation
A. SUBJECTIVE PARAMETERS		
1. <i>Shoola</i> (Pain)	0	Absent (No Pain)
	1	Mild (Occasional pain after long exertion)
	2	Moderate (Frequent Pain)
	3	Severe (Pain throughout the day)
2. <i>Kandu</i> (Itching)	0	Absent (No Itching)
	1	Mild (Occasional itching)
	2	Moderate (Frequent itching, not affecting sleep)
	3	Severe (Persistent itching, affecting sleep or activities)
3. <i>Daha</i> (Burning)	0	Absent (No Burning)
	1	Mild (Occasional burning sensation)
	2	Moderate (Frequent burning, not affecting activities)
	3	Severe (Persistent burning, affecting daily activities)
B. OBJECTIVE PARAMETERS		
1. <i>Shotha</i> (Swelling)	0	Absent (No Swelling)
	1	Mild (Slight swelling, not affecting mobility)
	2	Moderate (Noticeable swelling, affecting mobility)
	3	Severe (Marked swelling, severely affecting mobility)
2. <i>Sirakunchana</i> (Tortuosity)	0	Absent (No Dilated Veins)
	1	Mild (Few veins dilated after exertion)
	2	Moderate (Multiple veins confined to calf or thigh)
	3	Severe (Extensive involving both calf and thigh)
3. Skin Changes	0	Absent (No Discolouration)
	1	Mild (Blackish Patchy Hyperpigmentation)
	2	Moderate (Hyperpigmentation with Eczema)
	3	Severe (Non-healing wound with Discharge)

RESULTS

After completing the treatment, significant relief was seen in symptoms like *Shoola, Shotha, Daha, Kandu, Sirakunchana* and skin pigmentation. Changes in the severity of various symptoms after completion of treatment have been presented in Table No. 7.

Table No. 7. Assessment Score for each Criteria

Sr. No.	Parameters	Day 0	Day 10	Day 20	Day 30	Day 45	% Improvement
1.	<i>Shoola</i> (Pain)	2	2	1	1	0	100%

2.	<i>Kandu</i> (Itching)	1	1	1	0	0	100%
3.	<i>Daha</i> (Burning)	1	1	1	0	0	100%
4.	<i>Shotha</i> (Swelling)	2	2	1	0	0	100%
5.	<i>Sirakunchana</i> (Tortuosity)	3	3	2	2	1	66.7%
6.	Skin Changes	2	2	1	1	1	50%
Total Score		11	11	7	4	2	81.8%



Fig. 1 Before Treatment



Fig. 2 After Treatment

DISCUSSION

In the present case, the patient underwent a planned course of *Jalaukavacharana* treatment in seven sittings at an interval of five days. The progress of the treatment was monitored weekly in terms of both subjective and objective parameters.

The symptoms like *Shoola*, *Daha*, *Kandu*, *Shotha*, *Sirakunchana* and discolouration of the skin showed considerable relief even after 4 sittings of the treatment. As the treatment progressed in the next 31 days, the improvement in the symptoms became consistent and sustained. The follow-up done on the 45th day, after a gap of 14 days, showed 100% relief in *Shoola*, *Kandu*, *Daha* and *Shotha*. 66.7% relief in *Sirakunchana* and 50 % relief in Skin Pigmentation.

As per Ayurveda, the pathology of varicose veins is due to the vitiation of the humor Vata and *Raktadushti* in the *Siras* causing *Sirakunchana*.⁹ The symptoms like *Shotha* and *Shoola* are caused due to the stagnation of impure blood in the vessels and *Jalaukavacharana* removes the impure blood, thus relieves the congestion in the vessels. This initial phase of bloodletting acts as a detoxifying step, significantly reducing local swelling.

Once the blockage is removed, normal circulation of fresh and well-oxygenated blood is resumed. This enhances the nourishment of the affected tissues and heals the walls of the vessels. The reduction of intra-vascular pressure also aids in the relief of pain and swelling. However, only moderate improvement in the tortuosity of the veins was achieved. This might have been because of the structural and mechanical nature of venous valve incompetence.¹⁰

Kandu and *Daha* occurs due to stagnation of vitiated Vata. The repetition of the application of the leech therapy relieves *Shotha*, *Kandu*, *Daha* and *Shooladue* to reduced congestion. The *Sheeta* property of *Jalauka* relieves *Daha*. The relief in *Daha* can be explained in terms of *Pittahara* and *Raktahara* properties of *Jalaukavacharana* because both *Pitta* and *Rakta* are responsible for causing burning sensations in the body.^{11,12}

Skin Pigmentation is due to poor circulation leading to hemolysis and deposition of hemosiderin pigments. *Jalaukavacharana* removes stagnated blood and normal circulation is restored. Hence, deposition of pigment is prevented and skin tone is improved.^{13, 14}

The therapeutic effect of *Jalaukavacharana* can also be understood in terms of modern science. *Jalauka* releases various biological active agents in its saliva. These biological agents include hirudin, calin, hyaluronidase, destabilase, hirustasin, eglins and inhibitors of factor Xa, along with anesthetic and histamine-like agents. These agents possess anticoagulant, anti-inflammatory, analgesic, and venous decongestant activities provide relief from inflammation and pain.¹⁵

These agents in the saliva of the leech reduce inflammation by inhibiting cytokine activity and mast cell responses, thus reducing pain and discomfort.¹⁶ These agents also increase tissue permeability and promote better circulation and regeneration in the body. In addition, these agents also help in removing pain-causing agents accumulated in the area, thus providing immediate relief.^{17, 18}

CONCLUSION

Jalaukavacharana is indicated in conditions with localized Raktadushti.¹⁹ *Jalaukavacharana* provided quick and significant relief from *Sirajagranthi* symptoms, particularly in the symptom like *Shoola*, *Daha*, *Shotha* and *Kandu*. There was no reappearance of varicose veins throughout the 14 days follow-up period, from which it can be concluded that *Jalaukavacharana* is an effective long-term treatment. The present case suggests that *Jalaukavacharana* is a good alternative for patients seeking non-surgical options for management of varicose veins. Thus, we can conclude that leech therapy is effective, safe, cost-effective, and has encouraging potential in prevention of complications of varicose veins. The results of the study are encouraging enough to plan study on larger sample of patients.

DECLARATION OF PATIENT CONSENT

Authors certify that they have obtained patient consent form, where the patient has given his consent for reporting the case along with the photographs and other clinical information in the journal. The patient understands that her name and initials will not be published and due efforts will be made to conceal her identity, but anonymity cannot be guaranteed.

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