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RESEARCH ARTICLE

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

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Abstract

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

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

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

Conclusion: This case illustrates that Jalaukavacharnan provided quick and significant relief from Sirajgranthi symptoms, particularly in symptoms such as Shoola, Daha, Shotha, and Kandu.

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Introduction:-

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

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Varicose veins are dilated, tortuous, and elongated veins in the legs, characterized by the reversal of blood flow due to faulty valves. Risk factors include heredity, female sex, occupations that demand prolonged standing, immobility, raised intra-abdominal pressure such as in sports, tight clothing, pregnancy, raised progesterone level and altered estrogen-progesterone ratio, chronic constipation and high heels.¹ Certain jobs demand prolonged standing, such as bus conductors and policemen and individuals in these professions often suffer from varicose veins. It may also occur in people involved in excessive muscular contractions, such as rickshaw pullers and athletes.²

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

Varicose veins affect approximately 35% of the population, with severe cases comprising about 10%. These veins are typically confined to the long and short saphenous systems in around 60% and 20% of cases, respectively.⁶ Approximately 15% of males and 25% of women have noticeable varicose veins.⁷ In modern science, new techniques and facilities are available, but the treatment procedures have many drawbacks and do not provide complete relief to the patient. The main treatment in Ayurveda for varicose veins is Raktamokshana, i.e., Jalaukavacharna. It is preferred for its simplicity and efficacy.⁸ Jalaukavacharna is indicated for the removal of localized vitiated Rakta, which is also present in the disease of Sirajgranthi. In this case study, the efficacy of Ayurveda interventions, Jalaukavacharna as explained in classics, has been explored for the management of Sirajgranthi.

Case Report: -

History of Present Illness: -

A 53-Year-old male patient visited Panchakarma OPD with a complaint of pain in the medial side of the calf region on the left leg since 20 days, tortuosity of veins on both legs, more on the left leg than on the right leg since 1-year, mild swelling, mild itching and mild skin pigmentation. He also had complaints of a 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 / No 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. 4: Dashavidha Pariksha**

Prakriti	Vata – Kaphaj
Vikriti	Tridoshaj
Sara	Madhyama
Samhanana	Madhyama
Pramana	Madhyama
Satmya	Sarvarasa
Satva	Avara
Ahara Shakti	Madhyama
Vyayama Shakti	Avara
Vaya	Madhyama

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, BT and CT were within normal limits and all viral markers were non-reactive.

Treatment Protocol: -

Jalaukavacharna: The patient was subjected for Jalaukavacharna. Patient was advised to reduce weight and avoid prolonged standing. 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 Jalaukavacharna

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 Jalaukavacharna: -

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 and 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 before application.

PradhanaKarma: 4Jalaukas 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: LodhraChurnawas applied to achieve homeostasis. A proper bandage was applied to prevent post-procedure bleeding. Proper Vaman of Jalaukas was performed. After Vaman, Jalaukas were placed in a container with the label of the 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. Shoola (Pain)	0	Absent (No Pain)
	1	Mild (Occasional pain after long exertion)
	2	Moderate (Frequent Pain)
	3	Severe (Pain throughout the day)
2. Kandu (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. Daha (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. Shotha (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. Sirakunchana (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.	Shoola (Pain)	2	2	1	1	0	100%
2.	Kandu (Itching)	1	1	1	0	0	100%
3.	Daha (Burning)	1	1	1	0	0	100%
4.	Shotha (Swelling)	2	2	1	0	0	100%
5.	Sirakunchana (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 Jalaukavacharna 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 Jalaukavacharna 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 occur 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 Jalaukarelieves Daha. The relief in Daha can be explained in terms of Pittahara and Raktahara properties of Jalaukavacharna 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. Jalaukavacharna 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 Jalaukavacharna can also be understood in terms of modern science. Jalauka releases various biologically 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: -

Jalaukavacharna is indicated in conditions with localized Raktadushti.¹⁹ Jalaukavacharna 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 Jalaukavacharna is an effective long-term treatment. The present case suggests that Jalaukavacharna 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 a 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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