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#### Dr. Shubhangi P Thombare

PG Scholar, Department of Panchakarma, CSMSS Ayurved Mahavidyalay, Kanchanwadi, Maharashtra, India

#### Dr. Ramesh D Sonwane

Professor, Department of Panchakarma, CSMSS Ayurved Mahavidyalay, Kanchanwadi, Maharashtra, India

# Ayurvedic approach to manage Varicose veins (Siraj granthi): A clinical case study

## Shubhangi P Thombare and Ramesh D Sonwane

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#### Abstract

Varicosities are defined as veins that become dilated, elongated, and tortuous, frequently involving superficial, perforating, and deep venous systems. In Ayurvedic texts, this condition is correlated with Sirajgranthi. Conventional management in modern medicine-such as ligation and vein stripping-is costly, carries procedural risks including vascular or neural injury, and is associated with high recurrence rates. In contrast, classical Ayurvedic science, particularly the teachings of Acharya Sushruta, recommend various modalities including Jalaukavacharana (leech therapy), a specialized method of bloodletting. Medicinal leeches (Jalauka) facilitate expulsion of vitiated blood, with the anticoagulant and anti-inflammatory compounds in their saliva (e.g., hirudin) contributing significantly to therapeutic effects. This paper presents a case study of a 58-year-old male with right lower limb varicosities who achieved notable symptomatic relief through Jalaukavacharana.

Keywords: Jalaukavacharana, medicinal leech therapy, varicosities

#### Introduction

Varicosities represent a chronic venous disorder characterized by dilated, thickened, and tortuous veins, most often affecting the lower extremities. Clinically, patients may present with calf discomfort, ankle edema, pruritus, and complications such as eczema, thrombophlebitis, and ulceration. Predisposing factors include prolonged orthostatism, use of restrictive clothing, femoral venous thrombosis, and genetic susceptibility. Primary varicosities develop due to venous valve incompetence and weakened venous walls, leading to venous insufficiency, whereas secondary cases may arise from pregnancy, pelvic tumors, ovarian cysts, or deep vein thrombosis.

In Ayurvedic science, this disorder is compared with Sirajgranthi. Pathogenic factors aggravating Vata dosha invade the venous channels (sira), causing compression (sampeedana), constriction (sankocha), and desiccation (vishoshana) [1]. These changes result in nodular, protruding venous swellings. The classical text Sushruta Samhita prescribes bloodletting (siravyadha) and specifically Jalaukavacharana as appropriate interventions. Medicinal leeches, naturally possessing sheeta (cold) and madhura (sweet) properties, are especially indicated for pitta-dushta rakta disorders [2]. Modern research has corroborated their efficacy, attributing therapeutic benefits to their saliva's anticoagulant [3], vasodilatory, anti-inflammatory, and lymphatic drainage-promoting properties.

#### Case Report

A 58-year-old male presented to the Panchakarma Department of CSMSS Ayurved Hospital with a five-year history of lower limb discomfort. Clinical manifestations included dull aching pain extending from the calf to the dorsum of the right foot, mild ankle edema, pruritus, burning sensation, and cutaneous discoloration extending from below the knee to the foot. Symptoms were exacerbated by prolonged standing, strenuous activity, and evening hours, but improved with leg elevation. There was no past history of trauma, endocrine disorders, surgical interventions, or substance abuse. Importantly, no prior venous thrombosis was reported.

On examination, bluish reticular veins were visible along the right leg with localized tenderness. No ulcerations were identified. The subject's pain subsided upon leg elevation. A positive Mose's sign (pain on compression of the calf) was recorded. The diagnosis of varicosities was established and management was initiated with Jalaukavacharana in conjunction with oral administration of Saptasar Kashaya, Sthanik snehana (local oleation) with Prasarini Taila, and Bashpa Sweda (localized fomentation).

Corresponding Author: Dr. Shubhangi P Thombare PG Scholar, Department of Panchakarma, CSMSS Ayurved Mahavidyalay, Kanchanwadi, Maharashtra, India

#### **Examination**

The subject underwent routine investigations including CBC, ESR, RBS, PT-INR, urine analysis, clotting time, and bleeding time, all of which were within normal ranges. Ashtavidha Pariksha revealed Pittaja pulse, medium physique, and otherwise normal systemic parameters.

Varicosity severity was graded as C4 under the CEAP classification [4] (Clinical, Etiological, Anatomical, Pathophysiological), indicating skin changes attributable to chronic venous disease such as pigmentation and eczema.

Table 1: CEAP Classification

CEAP Clinical Score	Description				
Class 0	No visible or palpable signs of venous disease				
Class 1	Telangiectases or reticular veins				
Class 2	Varicose veins				
Class 3	Edema				
Class 4	Skin changes ascribed to venous disease (e.g. pigmentation, venous eczema lipodermatosclerosis)				
Class 5	Skin changes as defined above with healed ulceration				
Class 6	Skin changes as defined above with active ulceration				

#### **Treatment Protocol**

Internal therapy was initiated on admission with Saptasar Kashaya administered thrice daily and local application of Prasarini Taila for massage. Four sessions of Jalaukavacharana were scheduled at weekly intervals over one month. Oral medications were continued during and after leech therapy for an additional month.

 Table 2: Key ingredients of the formulations used

Formulation	Ingredients				
Tab Saptasar	Varsha, Bhubilva, Urubak, Sahachar, Shunthi,				
kashay	Agnimanth, Hingu, Ghrita				
Prasarini tail	Gandhaprasarini, Swaras, Eranda tail, Dugdha				

# Procedure of Jalaukavacharana Purvakarma (pre-procedure)

- Informed consent was obtained.
- Preoperative investigations like CBC, PT INR, RBS, BT, CT done and confirmed normal ranges.
- The subject was counselled.
- Instruments prepared, and leeches activated.

## Pradhanakarma (main procedure)

- Three medicinal leeches were applied to the most prominent and symptomatic areas of the right leg.
- The duration of attachment averaged 45 minutes. Detachment was either spontaneous or facilitated with Haridra (Turmeric) application.
- Local burning sensation was reported.
- Site dressing done appropriately to avoid post procedural bleeding.

# Paschatkarma (post-procedure)

- Hemostasis was achieved.
- Proper Vaman of Jalauka done.
- Jalauka were stored in labeled containers.
- The patient was advised for proper leg position.
- Diet and lifestyle modifications properly explained.

**Table 3:** Subjective Parameters

Grade	<b>Explanation</b>					
Shoola						
0	Absent (no pain)					
1	Mild (occasional pain after long exertion)					
2	Moderate (frequent pain)					
3	Severe (continous pain throughout the day)					
Daha						
0	Absent (no complains of burning sensation)					
1	Present (occasional or frequent feeling of Burning sensation)					

**Table 4:** Objective Parameters

Grade	Grade Explanation						
Shotha (oedema)							
0	0 Absent (no oedema)						
1	Present (mild to moderate oedema)						
Tourtousity							
0	Absent (no dilated veins)						
1	Mild (few dilated veiins after exertion)						
2	Moderate (multiple veins confined to calf or thigh)						
3	Severe (extensive involving both calf and thigh)						
Skin changes							
0	Absent (no discolouration)						
1	Mild (blackish patchy hyper pigmentation)						
2	Moderate (hyper pigmentation with eczema)						



Fig 1: Before and after treatment changes in patient

Table 5: Weekly relief in subjective and objective parameters

Symptoms	Day 1	1st week	2 <sup>nd</sup> week	3rd week	4th week	8th week
Shoola	3	2	2	2	1	1
Daha	2	1	0	0	0	0
Shotha	1	1	1	0	0	0
Tourtousity	3	3	3	2	2	1
Skin changes	2	2	2	2	1	1

#### Discussion

The subject underwent four sittings of Jalaukavacharana in the first month, followed by continuation of oral therapy in the second month. Weekly assessments documented progressive improvements. Ayurvedic concepts correlate varicosities with Sirajgranthi, manifesting as Sira Sankocha (tortuosity), Sira Vakrata (irregularity), Sira Utsedha (elevation), and Vishoshana (hardening). Pathogenesis involves vitiation of Vata and accumulation of vitiated blood. Consequently, bloodletting (Raktamokshana) is regarded as

the preferred modality. Jalaukavacharana is particularly indicated in conditions involving clotted or thickened blood (Grathita/Avagadha Rakta).

Medicinal leech's saliva is known to contain hirudin, histamine, serotonin, protease inhibitors, and anti-inflammatory agents, which exert anticoagulant, vasodilatory, thrombolytic, and analgesic actions. These bioactive compounds collectively enhance blood circulation, tissue regeneration, and symptom relief <sup>[5]</sup>. In this case, no adverse effects such as bleeding or hematoma were observed. Adjunctive therapies, namely Saptasar Kashaya <sup>[6]</sup> and Prasarini Taila <sup>[7]</sup>, likely potentiated the therapeutic outcome. By the end of two months, the subject experienced complete resolution of burning sensation and edema, along with marked improvement in pain, tortuosity, and skin changes.

#### Conclusion

This case study highlights the successful integration of local Jalaukavacharana with systemic and local Ayurvedic formulations in the management of Sirajgranthi (varicosities). The combined effect of leech therapy and supportive oral and topical interventions yielded substantial symptomatic improvement without adverse events. The findings reinforce the therapeutic potential of Ayurvedic bloodletting modalities in chronic venous disorders. Further clinical studies with larger sample sizes are warranted to substantiate these outcomes.

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