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Comparative Case Report: Ayurveda Protocol and Endo-Venous Chemical Ablation in the Management of Varicose Veins

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Abstract— *Varicose Veins, described in Ayurveda as Siragranthi, are among the most common venous disorders, affecting nearly 20–30% of the adult population worldwide and contributing significantly to morbidity and reduced quality of life. The condition occurs due to venous valve incompetence and reflux, resulting in dilated, tortuous superficial veins that manifest with pain, heaviness, oedema, itching, pigmentation, and in advanced stages, venous ulceration. In contemporary practice, management includes surgical stripping, Endo-venous ablation, and foam sclerotherapy. Although these approaches provide symptomatic relief, they are often associated with recurrence, procedural complications, and high cost. Ayurveda describes Siragranthi as arising from vitiation of Vata Dosha along with Rakta Dushti, leading to dilation, tortuosity, and dysfunction of veins accompanied by pain and discomfort. The therapeutic approach includes Upanaha, Vasthi and Siravyadha aimed at restoring normal circulation, reducing venous stasis, and alleviating symptoms. Despite the high prevalence of Siragranthi, there is limited clinical evidence directly comparing Ayurvedic management with modern interventional procedures such as Endo-venous chemical ablation. Hence, this study was undertaken to scientifically evaluate the efficacy of an Ayurveda treatment protocol against endo-venous chemical ablation in the management of Varicose Veins.*

Keywords— *Endo-Venous Chemical Ablation; Siragranthi; Siravyadha; Upanaha;Varicose Veins; Yogavasthi.*

I. INTRODUCTION

The Chronic venous insufficiency is a common vascular disorder that significantly impairs quality of life. Venous diseases of the lower limbs are increasingly prevalent and contribute considerably to global morbidity[1]. Among these, varicose veins—dilated and tortuous superficial veins resulting from valvular incompetence—are particularly widespread. The underlying mechanism involves persistent venous hypertension, which promotes progressive venous dilation and symptoms such as heaviness, fatigue, pruritus, and leg pain[2]. Established risk factors include hereditary predisposition, female sex, prolonged standing, sedentary habits, chronic constipation, pregnancy, restrictive clothing, and activities that increase intra-abdominal pressure[3].

Classical Ayurvedic texts describe *Siragranthi* with clinical features strikingly similar to varicose veins. The Ashtanga Hridaya Uttarasthana[4] attributes this condition to aggravated Vata dosha, often following exertion or sudden exposure to cold, which disrupts venous channels (*Sira*). Characteristic signs include pain (*Sampeedana*), constriction (*Sankochana*), distortion (*Vakreekarana*), dryness (*Vishoshana*), and nodular swelling (*Granthi*). Ayurvedic management focuses on therapies such as *Upanaha* (medicated poultice), *Vasti karma* (therapeutic enema), and *Siravyadha* (controlled bloodletting). These interventions aim to fortify venous walls and valves, restore venous circulation, and correct dosha imbalance. *Upanaha* enhances local perfusion and relieves inflammation and muscular tension; *Vasthi* serves as a primary treatment for *Vata* disorders by clearing obstructed channels[5]; and *Siravyadha* eliminates vitiated blood, reducing pressure and discomfort.

Modern medicine offers a spectrum of treatments, from conservative approaches—compression therapy and lifestyle modification—to minimally invasive procedures such as injection sclerotherapy, radiofrequency ablation, Endo-Venous chemical ablation (EVCA), and transilluminated powered phlebectomy. EVCA is especially valued for effectively ablating incompetent veins along their physiological flow path, yielding rapid symptom relief. Nevertheless, recurrence due to neovascularization or development of new varicosities remains a challenge. High procedural costs often limit accessibility for patients of lower socioeconomic status, and even with success rates exceeding 80%, EVCA may lead to pain, hyperpigmentation, edema, or relapse, while permanently eliminating venous structures and raising concerns about long-term vascular adaptation.

Given that varicose veins affect roughly 35% of the population—with about 10% developing severe complications—there is increasing interest in safe, cost-effective, and less destructive therapies[6]. Ayurvedic modalities, which seek to normalize *Vata*, enhance venous tone, and promote healthy circulation without structural obliteration of veins, represent a restorative alternative. Although individual Ayurvedic treatments have demonstrated symptomatic benefits, systematic evaluation of an integrated therapeutic protocol remains limited. The present study is therefore designed to compare the clinical effectiveness of a comprehensive Ayurvedic regimen (*Upanaha, Vasthi karma,* and *Siravyadha*) with Endo-Venous chemical ablation.

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II. CASE REPORT

Case 1- a 47 year old female presented with bilateral Varicose Veins since 5 years associated with persistent bilateral leg pain, itching, swelling near ankle region, and progressive skin hyperpigmentation over both lower limbs, which worsened by the end of the day and improved by limb elevation. Her BMI was 27.4 kg/m^2 and the CEAP classification was C2,3, Ep, As,p, Pr, indicating primary superficial venous incompetence with reflux. Venous Doppler Ultrasound showed incompetence of the valve, with no evidence of deep vein thrombosis. She had a significant family history of venous disease, and routine hematological investigations were within normal limits.

Case 2 – a 48-year-old woman presented with symptomatic varicose veins of the bilateral lower limb, characterized by pain, itching, induration, ankle edema, and diffuse hyperpigmentation for approximately five years. Symptoms were aggravated by prolonged standing and relieved by rest and limb elevation. Her BMI was 36.4 kg/m^2, reflecting more advanced clinical severity compared with Case 1. On examination, dilated tortuous veins were visible along the distribution of the great saphenous vein with associated skin changes. CEAP staging was C1,2,3, Ep, As,p, Pr, signifying primary superficial reflux with preserved deep venous competence. Venous Doppler Ultrasound confirmed extensive saphenofemoral junction incompetence and reflux into tributaries, without thrombosis. Baseline laboratory parameters were unremarkable, and the patient had no major comorbidities.

III. METHODS

TABLE I. Treatment

S. No.	Treatment Protocol	
	Case 1	Case 2
1	Upanaha – 7days Yoga Vasthi – 8 days Siravyadha – 1 day	Endo-Venous Chemical Ablation

Case 1 – Ayurvedic Treatment Protocol

The patient received a 15-day integrative Ayurvedic regimen comprising Upanaha Sweda, Yoga Vasti, and Siravyadha:

- Upanaha Swedana: Atasi Upanaha Churnam applied over the affected lower limbs 12 hours daily for 7 consecutive days.
- Yoga Vasti: An 8-day schedule was followed, alternating Erandamooladi Kashaya Vasti and Sahacharadi Matra Vasti.
- Siravyadha: performed on day 15.

Clinical assessment was conducted on day 16 and 30th for final follow-up evaluation.

Case 2 – Endovenous Chemical Ablation

The second patient underwent endovenous chemical ablation (EVCA) as a single-day procedure for bilateral great saphenous incompetence. Under strict aseptic precautions, polidocanol foam was injected along the incompetent venous segments until complete obliteration was achieved. Compression bandaging and graduated stockings were applied post-procedure.

Clinical assessments were performed on day 16 and day 30 post-procedure.

IV. RESULTS

TABLE II: Assessment of Case 1

No.	Parameters	1st day	16th day	30th day
1	Pain	3	2	1
2	Itching	2	1	0
3	Varicose Veins	2	2	2
4	Induration	2	1	0
5	Venous Edema	2	0	0
6	Skin Pigmentation	1	1	0

TABLE III: Assessment of Case 2

No.	Parameters	1st day	16th day	30th day
1	Pain	2	1	0
2	Itching	3	2	1
3	Varicose Veins	3	2	2
4	Induration	2	1	1
5	Venous Edema	3	2	1
6	Skin Pigmentation	0	2	3

Both cases showed symptomatic improvement over the follow-up period. In Case 1, treated with the Ayurvedic protocol of Upanaha, Yoga Vasthi, and Siravyadha, pain decreased from 3 on day 1 to 1 on day 30, itching resolved completely (2 → 0), induration subsided (2 → 0), venous edema disappeared (2 → 0), and skin pigmentation improved (1 → 0), while the varicose vein grade remained stable at 2. In Case 2, managed with endovenous chemical ablation using polidocanol, pain dropped from 2 → 0, itching from 3 → 1, induration from 2 → 1, and venous edema from 3 → 1, with varicose vein prominence decreasing from 3 → 2; however, skin pigmentation increased from 0 → 3 by day 30, indicating post-procedural hyperpigmentation. Overall, both treatments provided notable relief in pain and edema, but the Ayurvedic protocol achieved broader resolution of itching, induration, and pigmentation without new skin changes, whereas chemical ablation offered faster pain relief and partial varicosity reduction but was associated with progressive pigmentation.

V. DISCUSSION

Varicose Veins in the legs are a common chronic vascular condition resulting from prolonged venous insufficiency, leading to dilated, tortuous veins, pain, heaviness, and skin changes. Conventional treatment modalities such as vein stripping, sclerotherapy, chemical ablation, and surgery primarily target the structural defect but often fall short in addressing the functional and systemic aspects of the disease. Ayurveda offers a comprehensive and individualized approach based on the principles of *Tridosha* and *Srotas* dysfunction. The rationale for integrating an Ayurveda protocol lies in its potential to restore circulatory balance, reduce inflammation, and improve venous tone through both systemic and local therapies. This discussion explores the comparative outcomes of such an integrative approach alongside conventional treatment in the management of Varicose Veins.

Mode of action of Upanaha[7,8]

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In this study, Upanaha Sweda was applied for seven days, 12 hours daily, using Atasi Upanaha Choorna mixed with Tila Taila. The oily base and moist heat enhanced skin permeability, promoting transdermal absorption of anti-inflammatory, venotonic phytochemicals. The warm, occlusive poultice increased local temperature, improved cutaneous blood flow, stimulated lymphatic drainage, and reduced edema and pain. For varicose veins, this combination of heat, occlusion, and herbal penetration improved venous return, reduced inflammation, and relieved symptoms, while the Kapha-Vatahara properties of Atasi further supported circulation and tissue repair.

Mode of action of Vasthi[9,10]

Vasthi is the principal therapy for pacifying Vata Dosha, whose primary seat is the large intestine. When administered rectally, its Veerya (active potency) rapidly spreads through the circulatory and nutritional channels, mobilizing aggravated Doshas from the abdomen, flanks, and distant tissues for systemic elimination. The Snigdha (unctuous), Guru (heavy), and Ushna (warm) qualities of medicated oil counteract the dry, light, and cold nature of vitiated Vata, ensuring smooth diffusion through subtle channels. Pharmacologically, Vasthi delivers phytoconstituents via rectal absorption into the hemorrhoidal venous plexus, bypassing first-pass metabolism for fast systemic action. Medicated oils provide anti-inflammatory, venotonic, and antioxidant effects that strengthen venous walls, reduce endothelial injury, and improve elasticity. Herbal decoctions enhance microcirculation, relieve stasis, and reduce edema, while lipid-based formulations support mucosal uptake and sustained release. Gentle rectal stimulation may also activate the parasympathetic system, promoting vascular relaxation and improved hemodynamics.

Mode of action of Siravyadha[11]

Siravyadha, the principal Ayurvedic method of Raktamokshana (therapeutic bloodletting), removes stagnant, vitiated blood to relieve venous pooling and restore the natural mobility (Chala Guna) of Vata. In Siragranthi—clinically akin to varicose veins—Vata is the primary dosha involved, with Rakta and its Upadhatus contributing to disease progression. Controlled venesection lowers intravascular pressure, alleviating pain, edema, and venous stasis while improving circulation and reducing risks of thrombosis, pigmentation, and itching. Physiologically, Siravyadha clears inflammatory mediators such as substance P, reduces leukocyte accumulation, and helps reverse endothelial dysfunction common in chronic venous disease. The mild blood loss also stimulates bone marrow activity and erythropoiesis, enhancing hemorheology and systemic circulation. By expelling Dushta Rakta, this therapy protects venous walls and prevents further skin changes or ulceration.

Mode of action of EVCA[12]

Endo-venous chemical ablation (EVCA) with polidocanol foam produces permanent venous closure by chemically damaging the endothelium. The foam, created by mixing polidocanol with air or physiologic gas, displaces intraluminal blood and maintains prolonged endothelial contact. Its detergent effect disrupts membrane lipids, exposing subendothelial collagen, triggering platelet aggregation and thrombus formation that later organizes into fibrotic occlusion. Using the Modified Microfoam Sclerotherapy Technique enhances sclerosant distribution and limits washout.

In this study, patients experienced steady pain reduction and significant downgrading of varicose vein severity, reflecting the expected mechanism of endothelial injury and occlusion. Skin changes and induration improved more slowly, consistent with the chronic nature of venous hypertension and gradual tissue remodeling.

VI. Conclusion

Both treatment approaches demonstrated meaningful relief of varicose vein symptoms. The Ayurvedic protocol provided comprehensive improvement in pain, edema, itching, and pigmentation without structural vein loss, while endo-venous chemical ablation achieved rapid pain reduction and vein closure but was associated with slower skin recovery and post-procedural pigmentation. These findings suggest that integrative, patient-specific strategies may optimize outcomes in chronic venous disease.

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