

COMPLETE REMISSION OF VARICOSE VEINS THROUGH INTEGRATED THERAPY W.S.R. TO JALAUKA AVACHARANA: A UNIQUE CASE REPORT

Acharya Balkrishna^{1,2}, Dr. Kanak Soni^{2,3}, Jaya Upreti^{1*}, Dr. Purva Soni³, Vedpriya Arya^{1,2}, Muskan Chauhan¹

¹Patanjali Herbal Research Division, Patanjali Research Foundation, Haridwar-249405, Uttarakhand, India

²Department of Allied and Applied Sciences, University of Patanjali, Patanjali Yogpeeth, Haridwar-249405, Uttarakhand, India

³Patanjali Wellness, Haridwar-249405, Uttarakhand, India

*Corresponding author: Jaya Upreti

*Email: jaya.upreti@patanjali.res.in

Abstract

Background

This study aims to evaluate the clinical outcomes and safety profile of leech therapy as a potential alternative or adjunctive treatment for varicose veins. Specifically, it examines the efficacy of leech therapy in managing varicose vein symptoms.

Methodology

A prospective case study was conducted with a single patient receiving treatment at the Ayurvedic Panchakarma department. The effects of leech therapy were assessed based on the patient's self-reported evaluation of varicose vein treatment over a 5-week period, during this, six sessions of Jalauka avacharana (Medicinal leech therapy) were administered to the patient.

Results

Following the six sessions of leech therapy, the patient experienced gradual alleviation of symptoms, including reduced pain and burning sensations. Moreover, significant improvements were noted in reducing swelling, lumping, skin discoloration, tortuosity, and itching associated with varicose veins. These findings suggest the potential effectiveness of leech therapy in managing varicose vein symptoms.

Conclusions

Leech therapy shows promise as a viable option for managing varicose veins, offering noticeable improvements in symptom relief and overall vascular health. Integrated therapy incorporating Ayurveda Panchakarma, naturopathy, and yogasanas may provide comprehensive support for individuals with varicose veins. Larger-scale studies are warranted to validate these preliminary outcomes and explore the long-term efficacy of integrated therapeutic approaches in varicose vein management.

Keywords: Ayurveda; Case Report; Leech therapy; Naturopathy; Varicose veins.

Introduction

Varicose veins (VVs) represent a significant health concern worldwide, affecting approximately 10-20% of the Western population and around 5% of India's populace. Globally, varicose veins afflict an estimated 2%-73% of individuals, imposing a substantial burden on healthcare systems due to their chronic nature and high prevalence ^[1, 2]. Specifically, varicose veins affect 16% of men and 29% of women, while spider veins, known as Telangiectasias, impact 43% of men and 55% of women ^[3]. The overall incidence of varicose veins ranges from 10% to 30% ^[4]. Varicose veins are characterized by dilated branches of major and small saphenous veins, presenting as thick, bulging, swollen, and often discolored veins, predominantly appearing on the thighs and legs ^[1]. These abnormal veins not only cause physical discomfort but also pose cosmetic concerns, particularly among women ^[3], originate from faulty valves in the deep, superficial, or perforating veins of the lower limbs, which disrupt blood flow and elevate venous pressure, leading to the formation of enlarged, elongated, or twisted subcutaneous veins ^[5].

In India, varicose veins constitute a prevalent surgical issue, disproportionately affecting individuals who may overlook their health needs or come from low socio-economic backgrounds. This condition can significantly impair daily functioning and quality of life, potentially leading to severe complications if left untreated ^[1, 5]. To address varicose veins, various holistic approaches have emerged, including Ayurveda leech therapy, naturopathy, and yogasanas. Ayurvedic leech therapy, known as *Jalauka avacharana*, involves the controlled application of medicinal leeches to affected areas, aiming to improve blood circulation, reduce inflammation, and alleviate pain associated with varicose veins. Naturopathy emphasizes lifestyle modifications, dietary interventions, hydrotherapy, and herbal remedies to support venous health and overall well-being. Yogasanas, such as leg-elevating postures, gentle stretches, and breathing exercises, can enhance venous return, promote circulation, and alleviate symptoms of varicose veins ^[6].

By integrating these complementary modalities into treatment plans, individuals with varicose veins may experience comprehensive support in managing their condition and improving their overall vascular health ^[7]. Further research and clinical trials are warranted to explore the efficacy and long-term benefits of these integrative approaches in varicose vein management.

Risk factors

Varicose vein development is a complex process involving a multitude of pathophysiological factors, including impaired venous return due to reflux, elevated venous pressure, incompetent valves, altered vein structure, inflammatory responses, elevated shear stress, hereditary variation, obstructed venous outflow, and superficial vein incompetence ^[6, 7]. While the progression of varicose veins is influenced by age, gender, occupation, pregnancy, family history, smoking, body mass index (BMI), obesity, exercise level, genetics, and lifestyle habits ^[2].

Case Presentation

Patient Information

A 64-year-old female visited at Patanjali Yogpeeth, Haridwar with complaints of varicose vein with symptoms of leg pain, swelling and dilated superficial veins since last 12 years.

Past Medical History

The patient complained for hypertension since last 35 years accompanied by bulky uterus, weak eye sight and gastric trouble.

Psycho-social History

The patient is a housewife with no notable family history of varicose veins. She does not smoke or drink alcohol and engages in a moderate level of household activities.

Clinical Findings

Upon arrival at the hospital, the patient underwent a systematic clinical evaluation conducted by a medical physician to assess the impact of the disease. Vital signs, including temperature, pulse, blood pressure, height, and weight, were measured to evaluate the patient's physiological status. The observations are summarized in (Table 1).

Timeline

A patient with varicose veins was admitted to the Patanjali Wellness Centre in Haridwar for a five-week treatment program. In the first week, two sessions of leech therapy were administered to the patient. Subsequently, one session per week was provided for the next four consecutive weeks. After completing all sessions, a follow-up was conducted to assess the patient's outcomes. The patient showed positive signs of improvement, with a noticeable reduction in symptoms.

Diagnostic Assessment

Physical Examination

The patient exhibited mild signs of depression, partially attributed to challenges in foot mobility. Additionally, she presented with increased body weight and localized inflammation in her both legs.

Biochemical Investigation

Biochemical parameters (**Table 2**) provided insights into the patient's condition and the extent of disease severity.

Radiological Investigation

To assess the patient's blood flow and evaluate the condition of the veins, a bilateral Doppler ultrasound (USG) was performed. Additionally, an X-ray of both legs was taken to examine the bone structure and surrounding tissues, offering further insights into any underlying issues that may contribute to the patient's condition.

Therapeutic Intervention

The patient was treated using the Ayurvedic method *Snehapana* and mud application before *Jalauka avacharana* to avoid *Vata prakopa* followed by recommended *Yogasanas*.

Snehana or Snehapana

Snehapana plays a vital role in Panchakarma, serving as a preparatory step in *Shodhana* therapy to various diseases. It utilizes *sneha* (oil or ghee) as a vehicle to transport toxins within the body. This procedure induces *Snigdhatta* unctuousness, *Vishyandana* liquefaction, *Mardavata* tenderness, and *Kledana* moistening, promoting *vatanulomya*, *diptagni*, and internal *snigdhatta*, leading to characteristics like greasy feces and internal body softening [8].

Yogasanas

Asanas effectively treat varicose veins by relieving symptoms and in some cases, restoring valve efficiency. Inverted asanas play a crucial role by aiding the drainage of stagnant blood back to the heart, helping damaged veins return to more normal dimensions and promoting valvular competence [9]. Suggested *Yogasanas* are *Makarasana*, *Bhujangasana*, *Shavasana*, *Vajrasana*, *Pawanuktasana*, Slow yogic jogging without jumping, *Surya namaskara*, *Tadasana* and *Yognidra* were practiced daily for 30 minutes for 5 weeks.

Naturopathy Management

Naturopathic therapies were given to the patient along with Leech Therapy including Hot foot bath (20 min, thrice a week), Mud therapy (40 min, twice a week), Abdominal thermal pack (60 min, thrice a week).

Leech Therapy

The present case of the patient with varicose veins (*Sirajgranthi*) underwent *Jalauka avacharan* (leech therapy) followed by some pre therapy treatment. Patient was explained about the procedure and written consent was taken. Firstly, patient allow to relax in comfortable position; three leeches were applied to the left lower limb. Leech therapy involves a painless initial bite due to the mild anesthetic in their saliva [10], followed by an attachment period of 30 to 35 minutes, during which the leech extracts 5 to 15 ml of blood. The anticoagulant and vasodilator in the leech saliva allow the wound to ooze up to 1-2 ml of blood for 1 hours. Typically, leech bites bleed for an average of 2-3 hours. According to Acharya Charak, leeches (*jalauka*) are considered the best among all *anushashtras*, possessing a cooling (*sheeta*) quality in nature. The salivary gland secretion of medical leeches has resolving activity, improve microcirculation disorders, restoring damaged vascular permeability and alleviating hypoxia [11, 12].

Follow-up and Outcomes

After one month of follow-up the patient showed satisfactory improvement in symptoms and pain in the both legs. There was a visual improvement in condition and pain related symptoms were also reported (**Figure 1, 2**).

Discussion

The investigation into the application of leech therapy for varicose vein patients yields significant insights into alternative approaches for managing this condition. When individuals choose leech therapy over conventional allopathic treatments, positive outcomes are evident, showcasing the potential efficacy of this alternative method [13]. This case study underscores the viability of leech therapy as an option for those who seek alternatives to traditional interventions [14]. Surgical interventions, external laser treatment, injection sclerotherapy and endogenous interventions offer specific benefits but come with associated risks in some cases [4]. Meanwhile, Non-invasive approaches, such as leech therapy, are employed to enhance blood circulation and mitigate the symptoms associated with varicose veins [13]. The promising findings for using leech therapy in varicose vein management highlight the need for further research into its mechanisms and long-term effects. Qualitative assessments of patient satisfaction, comfort levels, and adherence to leech therapy protocols can provide valuable insights into the holistic impact of this approach.

Conclusion

In conclusion, the positive outcomes observed in varicose vein patients opting for leech therapy underscore its potential as a viable alternative to traditional interventions. However, the complex nature of the condition necessitates further research to validate and refine the understanding of leech therapy's long-term benefits. A multidimensional approach, considering both quantitative and qualitative aspects, will contribute to a more nuanced and comprehensive evaluation of leech therapy in the management of varicose veins.

Tables and Figures

Table: 1 Systemic Examination of the patient at the time of admission and after treatment

Systemic Examination	Pre	post
Blood Pressure (mm/Hg)	160/112	140/100
Pulse (bpm)/Temp. (°F)	94 / 98.7	89/ 98.7
Height (cm)	158	158
Weight (kg)	88	86
Sleep	Disturbed	Normal
Mobility	Restricted	Mobile
Oedema	Yes	Decreased
Bluish Discoloration	Yes	less
Prominent Reticular Vein	Yes	No
Tortuosity of Vein	Yes	No
Ulceration	No	...

Table: 2 Biochemical parameters of Patient after treatment

Biochemical Investigation	
Bleeding time	2 min-10 sec
Clotting time	5 min- 45 sec
Hepatitis surface antigen (HBsAg)	Non-Reactive
Glucose (RBS)	90.2 mg/dl
Complete Blood Count (CBC)	
Haemoglobin	13.8 g/dl
Total TLC Count	8050/cumm
Total RBC Count (TRBC)	4.92 millions/cumm
Platelet Count	2.41 lakh/cumm
MCV	84.8 Fl

Figures:

Figure- 1: Before Treatment



Figure-2: After Treatment



Figure-1 displays dilated, tortuous, and lumpy veins prior to treatment, while **Figure-2** illustrates the improvement in varicose vein condition following leech therapy.

Financial support and sponsorship

This study was supported by Grant-in-Aid (Z.15015/12/2018-COE) under Ayurswasthya Yojana for the Establishment of the Centre of Excellence of Renovation and Upgradation of Patanjali Ayurveda Hospital, Haridwar, India

Conflicts of interest

Author declares there is no personal and financial conflict of interest.

Informed Consent

A written informed consent was signed and obtained from participant for participating in this study and publishing the data obtained through this study.

Patient's perspective

The patient was satisfied with the treatment provided.

References

1. Raetz J, Wilson M, Collins K. Varicose veins: diagnosis and treatment. *American family physician*. 2019 Jun 1;99(11):682-8.
2. Aslam MR, Muhammad Asif H, Ahmad K, Jabbar S, Hayee A, Sagheer MS, Rehman JU, Khalid S, Hashmi AS, Rajpoot SR, Sharif A. Global impact and contributing factors in varicose vein disease development. *SAGE Open Medicine*. 2022 Aug;10:20503121221118992.
3. Mishra S, Ali I, Singh G. A study of epidemiological factors and clinical profile of primary varicose veins. *Medical Journal of Dr. DY Patil University*. 2016 Sep 1;9(5):617-21.
4. Lin F, Zhang S, Sun Y, Ren S, Liu P. The management of varicose veins. *International surgery*. 2015 Jan 1;100(1):185-9.
5. Joseph N, Abhishai B, Thouseef MF, Abna A, Juneja I. A multicenter review of epidemiology and management of varicose veins for national guidance. *Annals of medicine and surgery*. 2016 Jun 1;8:21-7.
6. Mulla SA, Pai S. Varicose veins: a clinical study. *International Surgery Journal*. 2017 Jan 25;4(2):529-33.
7. Bootun R, Onida S, Lane TR, Davies AH. Varicose veins and their management. *Surgery (Oxford)*. 2016 Apr 1;34(4):165-71.
8. Nanarkar P, Mangal G. A Conceptual Study of Snehapana Administration and its Types Based on Karma. 2022;5(4);138- 143.
9. Chauhan S, Patra S, Singh SP, Lakhani JD. Combined effect of yoga and naturopathy in uncomplicated varicose vein disease—a prospective randomized controlled trial. *Journal of Ayurveda and Integrative Medicine*. 2023 May 1;14(3):100718.
10. Abdullah S, Dar LM, Rashid A, Tewari A. Hirudotherapy/leech therapy: applications and indications in surgery. *Arch Clin Exp Surg*. 2012 Jan 1;1(3):172-80.
11. Kazi W, Patel J, Sharma V, Panchal S. Role of Jalokaavacharana in the Management of Varicose Veins (Sirajgranthi)-A Case Study. *Asian Journal of Pharmaceutical Research and Development*. 2023 Aug 13;11(4):52-5.
12. Srivastava P, Mangal G. Outcome of Jalaukavacharan (Medicinal leech therapy) in varicose vein—A Case Report. *International Journal of Ayurveda and Traditional Medicine*. 2019 Dec 31;1(1):16-20.
13. Singh SK, Rajoria K. Medical leech therapy in Ayurveda and biomedicine—A review. *Journal of Ayurveda and integrative medicine*. 2020 Oct 1;11(4):554-64.
14. Albarqy IA, AlQarni FM. Management of Varicose Veins: A respective reviewstudy. *International Journal*. 2022 Oct;10(6).