

**A ROLE OF JALAUKAVACHARANA (LEECH THERAPY) IN VARI-  
COSE VEIN WITH ECZEMA (CHRONIC DERMATITIS)**

**– A CASE REPORT**

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**ABSTRACT**

Varicose veins are generally caused due to weakening of vein walls and valves. The walls of the veins have stretched and lose their elasticity causes vein to weaken. In Ayurveda classics describe the ailment of varicose veins as (“*Siraja Granthi*”). As per *Ayurveda Jalaukavacharan* (leech therapy) is indicated in all diseases which are caused due to *Rakthadusti* (vitiated blood) and *twakvikara* (discoloration of skin). *Jalaukavacharan* is considered as a *Shodhana* (purification) procedure in *Raktajavikara*. A 35 year old female patient known case of varicose vein was visited in OPD of Dept. of Shalya tantra in Shubhdeep Ayurved Medical College and Hospital, Indore. She had the complaints of tortuous and dilated vein with aching pain, eczema and depigmentation of skin of both lower limbs since 5 years. *Jalaukavacharan* followed by internal medication was given. After 4 seating of *jalaukavacharan* patient showed marked improvement in symptomatology like pain,eczema and depigmentation of skin of both lower limbs, changes in the skin were also starts reversing to normal skin.

**Keywords:** *Sirajagranthi*, *Sodhana*( Bio purification), *Jalaukavacharana*, Varicose Vein

**INTRODUCTION:** Chronic venous disorders are common surgical problems in India. Varicose vein is one of them, which is an important cause of disability. A varicose vein occurs when veins become enlarged, dilated, tortuous and overfilled with blood <sup>[1]</sup>. Nearly 80% of instance, they are limited to the long and short saphenous vein networks, respectively. Varicose veins characteristically appear distended, raised, and have bluish-purple or red colour. Gradually develop aching pain, discoloration of the skin, itching and ankle swelling are customary symptoms. Typically, the presence of convoluted dilated subcutaneous veins is clinically visible. Varicose veins are caused by the incompetence of the valves and the fragility of the vein walls. Secondary causes include venous outflow blockage caused by pregnancy, fibroid, ovarian cyst, pelvic cancer, and deep

vein thrombosis <sup>[2]</sup>. Prolonged standing, advanced age, obesity, hormone replacement medication, and other risk factors for varicose veins are all frequent <sup>[3]</sup>. People who work in occupations that require them to stand for long periods of time, such as police officers, bus drivers etc are prone to varicose veins. In modern science the treatment of varicose veins includes surgical procedures such as vein ligation and ligation with stripping and sclerotherapy<sup>[4]</sup>. These methods, however, have adverse effects and do not give total relief. A chronic dermatitis also known as “stasis dermatitis” “Congestion eczema,” “Gravitational dermatitis,” “Gravitational eczema,” Stasis eczema” and “Varicose eczema” <sup>[5]</sup> refers to the skin changes that occur in the leg as result of stasis of/or pooling of blood from inadequate venous return. Inadequate venous blood return results in increased pressure

in the capillaries causing as an effect that both fluid and blood cells may “leak” out of the capillaries. This results in red cells breaking down, with iron containing hemosiderin possibly contributing to the pathology of this entity [6]. The condition may present with the sign/symptoms like swelling, redness, scaling, itching, pain, lipodermatosclerosis and lichenification of the skin of that particular lower limb.

In Ayurveda Varicose vein can be correlated with *Siraja granthi*, over a period it may leads to *Dushtavrana* (chronic venous ulcer). Acharya Sushruta explained *Jalaukavacharana* as a para-surgical procedure for *Raktajavikara*. It is considered to be the best due to its high efficacy and safety. *Jalouka* (leech) can be use in all *pittadusta rakta* (vitiated *pitta* and blood) condition (like inflammatory, suppurative and painful conditions for obtain relieve pain and inhibit suppuration)<sup>[7][8]</sup>. Leech Therapy is considered most unique and effective method of *Raktamokshan*. *Jalaukavacharana* is indicated in females, children’s, old persons and *Avarsatva* (less will power) patients those having poor threshold to pain [9]. It drains vitiated blood in various skin disorders and all types of inflammatory conditions.

The primary vitiated *Doshas* in *Siraja granthi* are *Vatadi dosha* and *Rakta*<sup>[10]</sup>. By doing *Jalaukavacharana*, the stagnant vitiated blood is evacuated, which aids in the retention of the *Chala Guna* of *Vata*. *Jalaukavacharan* moves the *Dushta Rakta* and clears the *doshas* route by eliminating *Srothorodha*. It contains *Aashukari Guna*, which, like the *Anushastra* method, has a faster effect in easing symptoms. *Jalauka* releases hirudin (anticoagulant) as it starts sucking blood, which dilutes and keeps the blood in a liquid form. Leech therapy is

also mentioned in various other health care systems for different therapeutic purposes. *Hirudo medicinalis* [The European medicinal leech species] which also known as the healing leech was preferred by the majority of medical practitioner compared to, *Hirudo decora* [the American species] which can suck a lesser amount of blood due to a smaller and superficial incision on prey skin [11,12,13]. In addition, many other species were also considered as medical tools, such as *Hirudinaria manillensis* [14], *Hirudo nipponia* [15,16], *Hirudo verbena*, *Hirudo orientalis* [17], and *Haementeria depressa* [18].

#### CASE REPORT:

A 35 years old female patient came in OPD Dept of Shalya Tantra Shubhdeep Ayurved Medical College and Hospital, Indore.

Patient name- XYZ

OPD No.- 2426

Date of registration – 4/02/2022

Chief complaint – Patient present with the complaint of dilated and tortures vein with mild swelling of both lower limbs with mild aching pain and cramp present occasionally since 5 yrs. Blackish discolouration and eczema also present since last 1 year.

H/O present illness – Patient was appears normal before 5 years. Gradually she was felt tired and aching pain in calf of both lower limbs. Sometimes patient was suffered cramps in the calf shortly after retiring to bed. Then she felt dilated and tortuous vein of the lower limbs. After some time skin over the varicosities itchy and pigmented. Then the skin was black in colour and thickened. The lesions were present lower than the knee up to the dorsum of foot.

Past history - No history of Hypertension, Diabetes Mellitus, Tuberculosis. Etc.

Personal history – She is housewife and not any history of prolonged standing and obesity. Family history – No any significant history found.

On examination- Local examination –1. On inspection - when patient stand up, the vein become prominent both lower limb below the knee joint and blackish discoloration of skin was present with eczema.

2. On palpation – brodies trendelenburg test – positive

3. Examination of the abdomen – abdomen – soft and not tender, No Hepatosplenomegaly present.

*Asthavidha Pariksha – Nadi- Vatapittaja, Mala- Nirama baddha mal pravriti, Mutra- Daha yukta mutratyaga, Jivha- Aipta, Shabda- Spashta, Sparsh- Rukshasparsh, Drika- Samanya, Akriti- Samanya*

*Dashavidha Pariksha – Prakriti- Vatpatik, Vikriti- Pittaraktaja, Sara-Raktasar, Sanhanan-Madhyam, Praman- Madhyam, Satva- Alpa, Satmya-Sarvaras satmya, Aharshakti- Samanya, Vyamashakti-Alpa, Vaya- Madhyam.*

Investigation - All routine blood investigations as hemoglobin gram percentage, total count, ESR, HbsAg, HIV, BT, CT and Random blood sugar, USG whole abdomen was performed to rule out any other specific disease and all investigation were within normal limits.

Diagnosis – patient was known case of varicose vein. The diagnosis made as chronic dermatitis on the clinical background due to presence of varicose vein in both the limbs.

Management [intervention] – Informed consent was taken before the leech application. Total four sitting of leech therapy

(every week) was performed followed by oral medication given for four weeks Tab.kaishor guggulu 250 mg 2tab twice a day with water after meal, Mahamanjst-hadi kwath 20ml twice a day with water before food, Gandhak rasayan 250mg 1tab twice a day with water after meal, Manibhadra avaleha half teaspoon at night.

**Result:** The first sitting of leech application and tacking oral medicine the severity of itching was reduced. According to her pain and cramp were also reduced. The inflammation and oedema at the lesion was also start subsiding from first sitting. Second and third time application of leech was minimise the itching and aching pain sensation and improvement in skin pigmentation. Following the fourth (last) sitting the itching remains minimal and seldom, although the changes in the skin were also starts reverse to normal skin. Results were found very satisfactory, the skin colour was reverse to subnormal and the itching was reduced and patient felt significant relief from therapy.

**DISCUSSION:** Varicose vein pathogenesis starts with dysfunction of venous valves, which causes venous hypertension and results in stretching of the veins. The blood proteins are leaked into the extra vascular space due weak veins. The region behind this may be the long standing case of varicosity of the superficial veins of leg. Leech application has peripheral vasodilator effects due to vasodilator a constituent in the leech saliva, which improves blood circulation and corrects ischemia around the eczema site. The Leech application reduce venous hypertension and congestion due to presence of Carboxypeptidase, Histamine like substances & Acetylcholine. After Leech application

expulsion of impure blood takes place, owing to which local vitiated *doshas* are removed. Similarly, it facilitates more fresh blood supply due to improved blood circulation, skin discoloration is corrected and venous valvular dysfunction is also pacified. As a consequence, it breaks the pathogenesis of "varicosity" at tissue level. However, from biochemical analysis, the saliva of leech contains about hundred pharmacologically active biological substances like Hirudin, hyaluronidase, vasodilators, anesthetics, antibacterial, fibrinases, collagenase etc. When these substances are inserted into tissues level while sucking blood, they are responsible for the analgesic, anti inflammatory and anaesthetic effects of leech therapy. Medicinal leech (*Hirudo medicinalis*) saliva contains hirudin, which inhibits blood coagulation by binding to thrombin. Medicinal leech therapy in producing venous decongestion, reversal of oedema, hyper pigmentation and healing of varicose ulcers.

The mode of action of leech therapy as per *Ayurvedic* literature, all the symptoms of disease are mainly *Pitta* and *rakta dosh* dominance and leech having *Shita virya*, *Madhur guna* it suppress the *Pitta dosh*, so that the symptoms resolved after leech therapy<sup>[19]</sup>. eczema occurs owing to accumulation of blood and its metabolites in that exacting regions. The capillaries are unable to remove hemosiderin like metabolites from the tissue due to disturbed venous return because of formation of pericapillary cuff around it, which later on produces itching and dermatitis.<sup>[20]</sup> Many study reported to leech saliva have some enzymes (hirudin) which affects on blood clotting factors and enhance the blood flow and improve the blood supply of that particular tissue. An improving of blood cir-

ulation and the reduction of accumulated metabolites are reversing the pathology.

**CONCLUSION:** Varicose veins are dilated veins do to improper function of valve's. This leads to stasis, thickening of blood, pain, chronic eczema and finally ulceration. As stasis is the main reason, *shodhana* of *rakta* is the best treatment. So *jalukavacharana* is the right choice for *sirajagranti* and chronic eczema. Leech therapy proves to be effective, time saving, affordable and acceptable treatment in varicose vein. Come to an end, leech therapy is a popular therapeutic practice all the way through the ages for a large number of diseases. At the present time, leech come back to the contemporary medicine with fewer applications, which were proven by a huge number of scientific studies and case reports. Use of leech therapy in the field of plastic and reconstructive surgery is expected to be of excellent importance due to the easiness of leech application and less side-effects.

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