

CLINICAL ASSESSMENT OF JALAUKAACHARAN (LEECH THERAPY) IN MANAGEMENT OF VARICOSE VEINS – A CASE REPORT

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ABSTRACT

Panchkarma is a *shodhan* treatment in *Ayurveda* which helps in eliminating toxins from the body. *Panchkarma* includes five basic processes. *Raktamokshana* is one out of them which is a mainstay of treatment for *Raktapradoshaja vikara*. *Jalaukaavcharna* treatment (Leech Therapy) is described under *Raktamokshana* for managing varicosities. Varicose veins are twisted and enlarged veins near the surface of the skin, most commonly in legs. The varicose veins are mainly caused by weakness of valves in the veins of legs. When it becomes chronic it causes venous flow insufficiency. This is an acute stage due to clogging of blood, preventing the blood flow back to the heart. In *Ayurveda* the disease of varicose veins is correlated with *Siraaj Granthi*. This basic problem is either due to obesity and prolonged pressure on the saphanous valve during pregnancy or due to more standing jobs. Common signs and symptoms include pain, tenderness, swelling, warmth, redness, ulcers, discoloration, and distension of surface veins. The treatment of varicose veins is given in *Sushrut Samhita*. *Ayurveda* reveals *Raktmokshan* by *Jalaukavcharana* (Leech therapy) to cure varicose veins. This is a case presentation of 27 years old female patient had a history of varicose veins, having complaints of pain, muscles cramps and swelling in both legs since one year. A colour Doppler ultrasound was positive for great saphenous vein varicosities in both lower limbs. *Jalaukaavcharna* was done weekly along with oral medication for total duration of 30 days with continuation of the previous medication. The patient got relief in clinical signs and symptoms of varicosities.

Keywords: *Panchakarma, Raktamokshana, Varicose veins, Jalaukaavcharna*

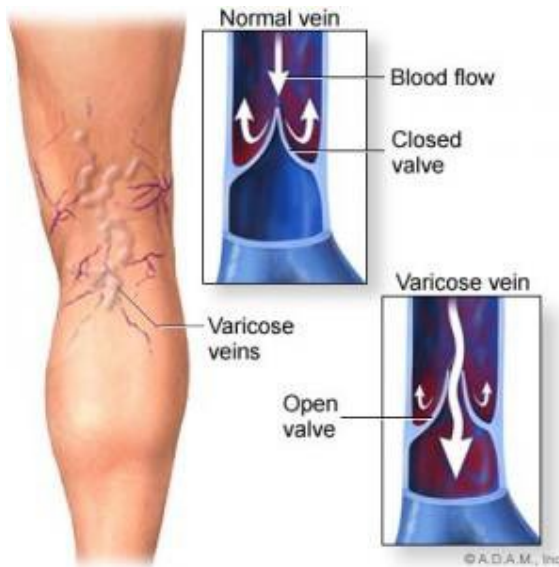
INTRODUCTION

Varicose vein is a disease in which veins are dilated, tortuous, elongated, swollen, seen bulging and protruding over the surface of skin. Varicose veins are different in colours from person to person. It may be blue red, greenish blue or of the colour of flesh. Majority of varicose veins are seen mostly on the thigh and back of calf muscles and they lesser extend posteriorly on the inner side of legs¹. The primary causes of varicose veins are-the incompetency of the valves and the weak-

ness in walls of the veins. When varicose vein becomes chronic it causes venous insufficiency. This is an acute stage due to clogging of blood preventing the flow of venous back to heart. The secondary causes are obstruction of venous out flow due to pregnancy, fibroid, ovarian cyst, pelvic cancer, ascites, iliac vein thrombosis etc.

The common risk factors of varicose veins include older age, obesity, major surgeries, hormonal replacement therapy etc. Women are affected more than

men (10:1). The persons involved in the prolonged standing jobs e.g. Policeman, conductor, etc. often suffer from varicose veins.² The common symptoms includes heaviness in the legs, muscle cramps, itching around the swollen vein and pain felt in the whole leg or in the lower part of the leg. Particularly in modern science the treatment of varicose veins is limb bandaging, surgical treatment (stripping of Saphenous vein), Sclerotherapy etc. but no medicinal treatment is available.³



In *Ayurveda* varicose vein is correlated with *Siraaj Granthi* mentioned in *Sushruta Samhita* and *Ashtang Sangrah*.

Seraaj Granthi

In this *prakupit vata dosha* compresses, raises and squeezes the net work of veins. In *Ayurveda* it is considered as *Krichh sadhya vyadhi* (curable with difficulty) in early stage and *asadhya* in late stages affecting the vital parts of the body.⁴

Sushruta and *Vagbhatta* mention *Jalaukavcharna* (leech therapy) in the treatment of all venous diseases. Leech therapy comes under the *Raktmokshana* treatment which is one of the *Ayurveda Panchkarma*⁵. It is safe, painless and highly effective. *Raktmokshana* is the refinement of blood so helpful in treating

many skin and vascular diseases. Before giving Leech Therapy to the patient it is must to give *Snehana* and *Svedana* treatment to the patient. Leech therapy involves an initial bite, which is usually painless (it is thought that leech saliva contains a mild anesthetic). An attachment period lasts 20 to 45 minutes and a post attachment period during which the site of bite continues to bleed. The final stage provides the primary therapeutic benefit caused by components in the leech's saliva which includes hirudin, a protein anticoagulant that inhibits thrombin in the clotting process and histamine-like substances that lead to vasodilatation.

The therapy develops the immune mechanism in the blood system by stimulating the antitoxic substances in the blood stream.⁶

CASE REPORT

A 27 year old female patient of *vata-pittaj prakruti* visited in OPD of Reva Clinic, Radaur on 20-10-2013. She was presented to us for treatment of varicosities involving both legs. She had complaints of pain in both legs since one year, muscle cramps in both legs, swelling over the lower legs, unable to walk properly. Pigmentation was also present on left leg in calf region.

Before one year patient was alright then suddenly she had a complaint of pain in both legs at calf muscle region. Then she took the treatment from a local doctor but had no any relief. After few days her condition got worsened and she was unable to bear weight on the legs then she visited Medanta Hospital, Gurgaon. There she was advised to go for Colour Doppler study of both legs. The colour doppler diagnosed Great saphenous varicosities in both legs (29-8-13). She was treated with tab. Daflon 500mg 1 BD, tab Paracip 650mg 1 BD for 20 days but she did not

have any relief with this treatment. Then she came to Reva Clinic, Radaur for further management.

On examination, tenderness, pigmentation and bulging was present in the calf region and swelling was also there. Pain was severe aching in nature which aggravated on standing for long time. Pain was constant and not radiated to any other part. Dorsiflexion of foot may cause pain in calf region (Homan's sign) was positive. Pain was relieved by elevation of legs. All investigations were normal except 25-OH Vitamin D total which was 7.15 ng/ml (low).

Patient was given *Mahayograj Guggul* 325mg 1 tab BD, *Maharasnaadi Kwath* 60 ml BD, *Vishgarbh Tail* for *abhyang* and *Rasnasaptak kwath* for *nadi swedan*. Along with this treatment *Jalaukaavcharana karma* was also started on 26

Oct 2013 and repeated weekly. Tab. Daflon 500 mg was continued. The total duration of treatment was 1 month. Patient was assessed weekly on the basis of visual analogue scale. Before treatment pain scale was 9. After one week from the start of treatment pain grade was 7 then 5 after second week, 4 after third week, 2 after completion of treatment i.e. four weeks. Frequency of muscle cramps was 5-6 times in a week which decreased to 4 times after 1 week of treatment. At completion of the treatment it decreased to once only per week. As far as walking distance is concerned, patient was unable to walk before the treatment properly. But with the treatment maximum walking distance was 20 meter, 50 meters, 100 meters, 200 meters at the completion of first, second, third and fourth week respectively.

Table 1: Observations of different parameters during treatment

Observations	Before Treatment	After 1 week	After 2 weeks	After 3 weeks	After 4 weeks
Pain (VAS)	9	7	5	4	2
Frequency of muscles cramps (in a week)	5-6 times	4 times	2 times	1 time	1 time
Maximum walking distance (Meters)	0	20	50	100	200

RESULT

The clinical features of varicose veins (varicosities) were improved at the end of 4th week. With a follow up for a period of 3 months, the patient had shown almost no signs of reoccurrence.

DISCUSSION

The goal of *Jalaukavcharna* for Varicose vein is to reduce morbidity by natural, non invasive, safe alternative healing with no side effects. Once the leeches attach themselves to the skin of the patient and start sucking blood, the saliva enters the puncture site along with enzymes and chemical compounds which are responsible for the progress of cure and treatment. Because of anti coagulating agents the blood becomes thinner, allow-

ing it to flow freely through the vessels. The anti clotting agents also dissolve clots found in the vessels, eliminating the risk of travelling to the other parts of the body and blocking an artery or vein. The vaso dilating agents widen the vessel walls by dilating them and this causes the blood to flow unimpeded too. Patients feel relief from the anti inflammatory and anaesthetic effects of the leech's saliva.

Enzymes and compounds present in the leech saliva act as anti coagulating factor. The most prominent enzyme is hirudin which binds itself to thrombins, thus effectively inhibiting coagulation of the blood. Another compound that prevents coagulation is calin. This works as an anti-coagulant by binding itself to collagen. It

is also an effective inhibitor of platelet aggregation caused by collagen. The saliva of leech also contains factor Xa inhibitor which blocks the action of the coagulation factor Xa.⁷

Clot dissolving effect of leeches

The action of destabilise involves the breakup of fibrins that have been formed. It also has a thrombolytic effect, which can also dissolve clots of blood that have formed.

Anti inflammatory effect of leeches

Bdellins is a compound in the leech's saliva that acts as an anti inflammatory agent by inhibiting Trypsin as well as Plasmin. It also inhibits the action of Acrosin .Another anti inflammatory agent is the Eglins.

Vasodilating effects of leeches

There are 3 compounds in the leech saliva that act as vasodilator agents and they are the histamine like substances the acetylcholine and the carboxy peptidase A inhibitors. All these act to widen the vessels thus causing flow of blood of the site.

Bacteriostatic and Anaesthetic effect of leeches

The saliva of leeches contains anaesthetic substances which relieve pain on the site and also bacteria inhibiting substances which inhibit the growth of bacteria.

There were no adverse events throughout the management. The mode of treatment was found to be cost effective, safe and easy to implement. So *jalaukaavcharna* is safe and effective method in management of varicose veins than modern treatments.⁸

CONCLUSION

The clinical features of varicose veins were improved at the end of second week and almost totally relieved after completion of one month treatment. Pre-

sent study shows *Jalaukavacharana* as a promising treatment for varicose veins.

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