



ISSN 2456-3110

Vol 8 · Issue 8

August 2023

Journal of
**Ayurveda and Integrated
Medical Sciences**

www.jaims.in

JAIMS

An International Journal for Researches in Ayurveda and Allied Sciences



Maharshi Charaka
Ayurveda

Indexed

Leech Application in Varicose Ulcer: A Single Case Study

Zahidul Islam¹, Namita Baishya², Champak Medhi³, Binod Kalita⁴

¹Post Graduate Scholar, Dept. of Shalya Tantra, Govt. Ayurvedic College, Guwahati, Assam, India.

^{2,4}Assistant Professor, Dept. of Shalya Tantra, Govt. Ayurvedic College, Guwahati, Assam, India.

³Associate Professor, Dept. of Shalya Tantra, Govt. Ayurvedic College, Guwahati, Assam, India.

ABSTRACT

A female patient aged 47 Years from Lankeswar, Guwahati, Assam approached Shalya OPD of Govt. Ayurvedic College and Hospital, Guwahati with complain of an ulcer over the left lower leg with pain and swelling since 6 months. Pain was very intense and whole foot was swollen. She was suffering from varicose vein in both the legs since 1 year. Family history was positive for varicose vein. On examination antero-posterior aspect of ankle joint ulcer was noticed. The ulcer was characteristically covered by unhealthy granulation tissue with slough, pus and foul smell. Color Doppler revealed partial SPJ incompetence in left leg. Case was diagnosed as a chronic unhealed varicose ulcer. After proper investigation the patient was planned for *Jalukaavacharana* to evaluate the efficacy of *Jalaukavacharan* in the management of *Dushta Vrana*. Total 4 settings of *Jalaukavacharana* was done.

Key words: *Dusta Vrana, Venous Ulcer, Varicose Vein, Jaluka Avacharana*

INTRODUCTION

A female patient 47 years came with complains of an ulcer over the left lower leg with pain and swelling since 6 months. Pain was very intense and whole foot was swollen. She was a diagnosed case of varicose veins since 1 year. On examination antero-posterior aspect of the ulcer was noticed. The ulcer was characteristically covered with unhealthy granulation tissue with slough, pus and foul smell. Family history was positive for varicose vein.

General examination

Pulse: 78/ min

Temp: 98.70 F

BP: 130/90mmhg

R.R.: 21/ min.

Kshudha: Prakrut

Nidra: Swabika

Mala: Badha

Mutra: Samyak

Dosha: Vatapradhana Kapha

Dushya: Twak, Mamsa, Sira

Mala: Purisha

Srotas: Rasa, Rakta, Mamsa, Purisha and Manovaha Srotas

Colour Doppler

Primary varicose veins with left saphenopopliteal incompetency and incompetent perforators explain in the text

Sub-cutaneous edema on lower leg bilaterally

No evidence of DVT or Ischemia.

Diagnosis: *Dushta Vrana* (Varicose Ulcer)

Treatment given

Daily dressing with *Triphala Kwatha* and *Ropan Tail*.

Address for correspondence:

Dr. Zahidul Islam

Post Graduate Scholar, Dept. of Shalya Tantra, Govt. Ayurvedic College, Guwahati, Assam, India.

E-mail: izahidul992@gmail.com

Submission Date: 13/06/2023 Accepted Date: 25/07/2023

Access this article online

Quick Response Code



Website: www.jaims.in

DOI: 10.21760/jaims.8.8.48

Four setting of *Jaluavacharan* done keeping gap of 7 days.

In each setting *Jalaukavacharan* 3-4 Leech were applied.

MATERIALS AND METHODS

Material used for *Jalaukavacharana*

Jalauka, *Haridra* powder, sterilized gauze pieces, dressing pad, cotton, gloves, disposable syringe, kidney tray, distilled water.

Method

The following treatment schedule was executed:

Patient was undergone four sittings of *Jalauka Avacharana* (once in a week) on OPD basis. *Jalauka Avacharana* was done in a standard protocol as described by *Acharya Sushruta*.

Jalaukavacharana Vidhi

The procedure can be briefed under three headings

1. *Poorva Karma*
2. *Pradhana Karma*
3. *Paschat Karma*

Poorva Karma (preoperative procedure)

This includes

- a) Collection of required materials
- b) Preparation of patient
- c) Preparation of *Jalauka*

Preparation of patient

Indicated person for the *Jalaukavacharana* should be made to sit or sleep in supine position then rub with mud or cow dung over the affected area (non ulcerated area) where *Jalaukavacharana* is to be done. If *Jalaukavacharana* is planned at the site of wound one should not rub because it increases the pain, there *Jalauka* will be attracted by *Gandh* and *Kledata* of the *Vrana*.

Preparation of *Jalauka*

Jalauka body is smeared with a paste of *Sarshapa* and *Rajani*. Then *Jalauka* is kept in clean water for period of one *Muhoorta* (48 min). By this procedure leeches will get rid of exhaustion and become activated.

Pradhana Karma (operative procedure)

The patient is made to sit or lie on the bed. The area of the body where *Raktamokshana* is planned should be dried and allowed to bite by *Jalauka*. *Jalauka* will suck the blood by itself. If *Jalauka* does not bite or suck, a drop of milk or blood is to be shed on the surface or a small prick is to be made, in spite of all these if the *Jalauka* does not suck then another *Jalauka* is to be taken for *Raktamokshana*. If its face appears like the hoof of a horse and raises its neck (*Ashvakhuravadanana*) we can understand that it has started sucking blood. As soon as *Jalauka* starts sucking, wet white gauze should be covered on it, leaving its facial region.

After sucking enough amount of blood *Jalauka* leave the host by its own. If the *Jalauka* doesn't leave and patient getting itching and pain at the site of *Jalaukavacharana* it is the indication of sucking pure blood and then *Jalauka* should be detached by sprinkling *Saindhava Lavana Choorna* at its mouth region.

Identification of *Shuddharakta Pana* by *Jalauka*

At the site of *Jalauka* bite if the person gets pain and itching sensation then it should be under stood that it is sucking pure blood then it should be removed. *Jalauka* sucks only *Dushta Rakta* from the site where *Dushta* and *Shuddha Rakta* are in combined form, like how the *Hansa Pakshi* drinks only pure milk even though it is mixed with water

Paschat karma (postoperative procedure)

- a) *Paschat Karma* for *Jalauka*
- b) *Paschat Karma* for patient

Paschat karma for Jalauka

As soon as the *Jalauka* detaches from the patient body by itself or by force, a paste of *Tandula Kandana* (rice flour) is to be applied over its body and a mixture of *Taila* and *Saindhava Lavana* is smeared on its mouth. Then with the help of thumb and index finger of left hand tail end of the *Jalauka* should be caught then body of *Jalauka* is squeezed with the fingers of right hand towards its face in a reverse direction. This helps

Jalauka to vomit the sucked blood. This is continued until the *Samyak Vamana Lakshanas* are achieved.

Samyak Vamana Lakshanas of Jalauka

After *Vamana Jalauka* should be kept in vessel containing fresh water, if the *Jalauka* moves in the container actively, it is suggestive of proper *Vamana*. After proper *Vamana*, *Jalauka* becomes active and strong.

Durvanta Lakshanas of Jalauka

If too much of vomiting, *Jalauka* becomes very weak or even may die. If vomiting is improper, it becomes intoxicated or lazy. If *Jalauka* becomes lethargic after leaving in water, and settles down in bottom of the vessel then *Vamana* should be carried out again. If it does not vomit the whole blood, then *Jalauka* gets a disease called *Indramada* or *Raktamada*.

Preservation of Jalauka after Vamana

After proper *Vamana*, *Jalauka* should be kept in water contained earthen pot. *Jalauka* once used should not be reused within seven days.

Paschat Karma for patient

Considering the status of the patient after the *Jalaukavacharana* management of its bite site should be done as follows

- In **Samyakyoga** - *Shatadouta Ghrita Abyanga* or *Shatadouta Ghritayukta Pichu Dharana* at the site of *Jalauka* bite.
- In **Heenayoga** - *Avagattana* by *Madhu* and wound should be squeezed to cause blood flow.
- In **Atiyoga** - *Sheetala Jala Parisheka*, *Pradeha* and *Bandana* for arresting the hemorrhage.
- In **Mithyayoga** - *Kashaya*, *Madhura*, *Sheeta*, *Ghritha Lepana* should be done.
- If because of *Sheeta Upachara*, *Vata* aggravates and causes pain, itching, then *Parishechana* of warm ghee is to be done.
- Dressing was done with *Jatyadi Taila* and *Triphala Kwatha* regularly, where as "Leech Therapy" was repeated weekly for 4 sittings.

- Total duration for treatment was 30 days.

Assessment

Assessment was done on

1. Day - 01
2. Day - 07
3. Day - 14
4. Day - 21
5. Day - 30

Changes occurred within the treatment period has been noted on criteria of assessment.

OBSERVATION

Parameters of observation include discharge (*Srava*) peripheral hyper pigmentation, size of ulcer, granulation tissue and pain. Patient was observed on above parameters on every week for five weeks.

Table 1: Parameters of Observations

Parameters	Grade			
	4= 100/	3=75/	2=50/	1=25/
Discharge	4= 100/	3=75/	2=50/	1=25/
Peripheral hyper pigmentation	4= 100/	3=75/	2=50/	1=25/
Size of ulcer [cm]	4= 100/	3=75/	2=50/	1=25/
Granulation tissue	4=100/	1=25/	2=50/	3=75/
Pain	4= 100/	3=75/	2=50/	1=25/

Table 2: Progressive report

Parameters	1 st week	2 nd week	3 rd week	4 th week	5 th week
	Discharge	100/	50/	25/	0/
Peripheral hyper pigmentation	100/	75/	50/	50/	25/
Size of ulcer [4cm]	100/	75/	50/	5/	0/

Granulation tissue	100/	75/	50/	5/	0/
pain	100/	75/	25/	25/	0/

Day 1



Day 7



Day 14



Day 21



Day 28



DISCUSSION

After Leech application expulsion of impure blood takes place, due to which local vitiated *Doshas* (toxins & unwanted metabolites) are removed. Similarly, it facilitates more fresh blood supply & promotes wound healing by formation of newer tissues.^[5]

Due to improved blood circulation, skin discoloration is corrected and venous valvular dysfunction is also pacified. Thus, it breaks the pathogenesis of "varicosity" at cellular level and helps in wound healing.^[6]

Sira and *Snayu* are the *Updhatu* of *Rakta*, *Jaluka* acts as '*Raktaprasadniya*'. Hence, healthy newer tissues were formed along with strengthening of the blood vessels, thus corrects venous valvular dysfunction.

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.

CONCLUSION

Jalukavacharana is the right choice of *Sirajagranti Janya Vrana*. Leech therapy proves to be effective, time saving, affordable and acceptable treatment in varicose ulcer. We can roughly conclude that Ayurveda can give a ray of hope in the treatment of varicose veins and varicose ulcer. After 30 days of Treatment the wound healed completely.

REFERENCES

1. Murthy Srikant. Susruta Samhita chikitsasthana 1/16 divaranayaadhaya, 1st Edition. Varanasi; Chaukhambha Orientalia.
2. Murthy Srikant. Susruta Samhita of Sushrutacharya; Sutra Sthana; (Vranaprashna Adhyaya) cha.22/7. 1 Edition Varanasi; Chaukhambha Orietalia reprint; 2012. Pg.no.166
3. https://en.wikipedia.org/wiki/Venous_ulcer
4. <https://www.hindawi.com/journals/ulcers/2013/413604/> by S. V. Agale - 2013, Volume 2013 (2013), Article ID 413604, 9 pages
5. K.R Srikantha Murthy. Susruta Samhitha. Chaukhambha Orientalia, Varanasi; nidhana sthana 11th chapter, sloka 8-9, pp533.
6. K.R Srikantha Murthy. Susruta Samhitha. Chaukhambha Orientalia, Varanasi; sutrasthana 22nd chapter, sloka 7, pp166.
7. Ambikadutt Shastri. Susruta Samhita. Nidanasthana 1st chapter sloka 27, pp 298.
8. Ambikadutt Shastri. Susruta Samhita. Chikitsasthana 4th chapter sloka 7, pp34.
9. Godfrey K. Uses of Leeches and Leech Saliva in Clinical Practice. Nursing Time. 1997 Feb; 62– 63.
10. Andreas Michalsen, Manfred Roth, Gustav Dobos; Medicinal Leech Therapy, New York 2007; 132-138.
11. Orevi M, Rigbi M, Matzner Y, Eldor A. A potent inhibitor of platelet activity factor from the saliva of the leech *Hirudo medicinalis*. Prostaglandins. 1992;43:483-489.

How to cite this article: Zahidul Islam, Namita Baishya, Champak Medhi, Binod Kalita. Leech Application in Varicose Ulcer: A Single Case Study. J Ayurveda Integr Med Sci 2023;08:290-294.
<http://dx.doi.org/10.21760/jaims.8.8.48>

Source of Support: Nil, **Conflict of Interest:** None declared.
