

“JALAUKAVACHARANA IN THE MANAGEMENT OF SIRAJA GRANTHI: A CASE REPORT WITH SPECIAL REFERENCE TO VARICOCELE”

Chetan M. H.^{1*}, Srinivas Masalekar²

¹Post Graduate Scholar, Department of Shalyatantra, Government Ayurveda Medical College Bangalore.

²Professor & HOD, Department of Shalyatantra, Government Ayurveda Medical College Bangalore.



*Corresponding Author: Chetan M. H.

Post Graduate Scholar, Department of Shalyatantra, Government Ayurveda Medical College Bangalore.

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ABSTRACT

Varicocele is a venous disorder characterized by dilatation and tortuosity of the pampiniform plexus, with higher prevalence seen in adolescents and young adults. It is observed in nearly 15–20% of healthy fertile men and about 40% of those with infertility. The condition is clinically important as it can compromise male fertility through impaired sperm function and DNA integrity. Modern therapeutic options include laparoscopic ligation and radiological embolization of the testicular veins. However, these interventions are invasive reserved for severe cases and often carry risks such as recurrence. From the *Ayurvedic* perspective although varicocele is not described as a distinct entity it shares similarities with *Siraja Granthi* as mentioned in the *Brihatrayees*. The classical management advised is *Siravyadha* (venesection). Considering the involvement of fine vessels such as the pampiniform plexus. In the present case a 32-year-old male presented with complaints of dull aching pain and a vague dragging sensation in the scrotum and groin, which are classical symptoms associated with varicocele. The patient was managed with *Jalaukacharana* (leech therapy), administered in four consecutive weekly sittings under aseptic precautions. Remarkably, by the end of the treatment course, he reported complete relief from pain, dragging sensation, and associated discomfort, with noticeable improvement in overall quality of life. The outcome of this case underscores the potential of *Jalaukacharana* as a safe, non-invasive, and holistic therapeutic modality for varicocele, offering an alternative to conventional surgical or interventional approaches.

KEYWORDS: Varicocele, *Jalakacharana*, *Siraja granti*, Pampiniform plexus, Case study.

INTRODUCTION

Varicocele is among the most common vascular disorders of the male reproductive system and is a major cause of secondary infertility. It represents an abnormal dilatation of the testicular venous plexus, leading to impaired thermoregulation and accumulation of toxic metabolites within the scrotal sac. These changes may alter spermatogenesis, resulting in reduced sperm quality and quantity, and eventually compromised fertility.^[6,7,8,9]

In Ayurveda, while a direct description of varicocele is absent, its symptomatology closely resembles *Siraja Granthi* of *Vrushana Kosha*. The pathogenesis described under *Siraja Granthi* involves venous dilatation and obstruction, which parallels the modern understanding of varicocele.^[1,2,3,4,5] The line of treatment advised in the classics is *Siravyadha*. However due to the delicate nature and smaller caliber of the testicular venous channels *Jalaukavacharana* being a controlled form of *Raktamokshana* indicated in *Avagada avasta* of *rakta dusti*^[10] (deep seated), has been considered more suitable

in patients such as children old age people those who are scared debilitated person.^[11]

It offers advantages such as minimal invasiveness, cost-effectiveness, and negligible complications. Exploring this therapy provides an integrative approach for managing varicocele and adds relevance to *Ayurvedic* principles in contemporary clinical practice.

CASE STUDY

A 32-year-old married male, working as Automobile mechanic in Bengaluru, presented with complaints of dull aching pain and a vague dragging sensation in the scrotum and groin for the past five months. The discomfort was gradual in onset, persistent, and worsened with prolonged standing or physical activity, while it subsided partially with rest and lying down. The patient also reported a swelling at the root of the scrotum, which he first noticed around the same time as the onset of pain. The swelling increased gradually, becoming more prominent on exertion or straining, and reduced in size on lying supine.

The patient gives no history of sudden severe pain, trauma, fever, dysuria, urinary frequency, hematuria, or systemic complaints like weight loss. Past medical history is also not contributory. The patient is not a known case of diabetes mellitus, hypertension, thyroid disorder or any infectious diseases. No prior surgeries were reported.

Family history revealed no similar complaints among first-degree relatives. Personal history indicated a mixed diet, normal appetite, adequate sleep, and regular bowel and bladder habits. The patient denied any addiction.

Table No. 1: Physical Examination.

General condition	Fair, conscious
Orientation	Oriented to time place and person
Built	Normosthenic
Nourishment	Moderate
Gait	Eupraxis
Pallor	Absent
Icterus	Absent
Cyanosis	Absent
Clubbing	Absent
Lymphadenopathy	Absent
Edema	Absent

Table No. 2: Vital Signs.

Blood pressure	130/80mmhg
Pulse	65bpm
Respiratory rate	17cpm
Temperature	Afebrile
Oxygen saturation	99%

Table No. 3: Systemic Examination.

Central Nervous system	Higher mental functions intact Oriented to time, place and person
Cardiovascular System	S1S2 heard, No added murmurs
Respiratory system	Normal vascular breath sound heard, No added sounds Bilateral air entry – normal
Gastrointestinal Tract	Soft, nontender, no organomegaly

Table No. 4: Local Examination.

On Inspection	Swelling over left scrotal region, No any discoloration Visible dilated veins.
On Palpation	Temp: slightly raised, Tenderness + Cough impulse – absent Feeling of bag of worms – absent Dilatation of veins on Valsalva manuver – Mild reflux.

Table No. 5: Investigation.

CBC	within normal limits
RBS	80mg/dl
HIV 1&2	Negative
HbsAg	Non reactive
USG Scrotum - on 23.08.2023	Left sided Grade 2/3 Varicocele

MATERIALS REQUIRED

- Nirvisha Jalauka
- Haridra/ Yastimadhuchurna
- Bandage

- Gauze
- Cotton

METHODOLOGY

The patient included in the study was thoroughly informed about the procedure, its benefits, and possible complications. After ensuring adequate understanding, written informed consent was obtained prior to initiation of therapy.

Procedure of *Jalaukavacharana* (Leech Application)



Fig. No. 1: Collection and storage of *Jalauka*.

Pradhana karma

1. Activated Leech was placed over the skin adjacent to the varicocele swelling and waited till the leech starts sucking the blood.
2. The Leech started to suck the blood which was evident by the “*Aswakhuravat*” position of the leech.
3. Then a wet gauze piece was placed over the leech to maintain moisture.
4. The patient was asked about the possible complications like, itching, pain at the site of bite and was comforted during the procedure.

Poorva Karma

1. The patient was positioned comfortably in a supine position and all the vitals were examined and noted.
2. The scrotal region adjacent to the varicocele swelling was cleansed using *Pancha valkala Kashaya*.
3. Healthy and active leeches were selected for the procedure and were placed in the *Haridra Jala* (water mixed with Turmeric Powder) for activation of the leeches.

5. The leech was allowed to continue sucking the blood for a period of 45 minutes or until it detached spontaneously. During which the size of the leech grew about 3 times to its original size – which confirms the proper *raktamokshana* by *Jalauka*.
6. In case Leech didn't detach spontaneously, a pinch of *Haridra churna* (Turmeric Powder) was dropped over the mouth of *Jalauka* at the site of bite - which detaches the leech from bite.

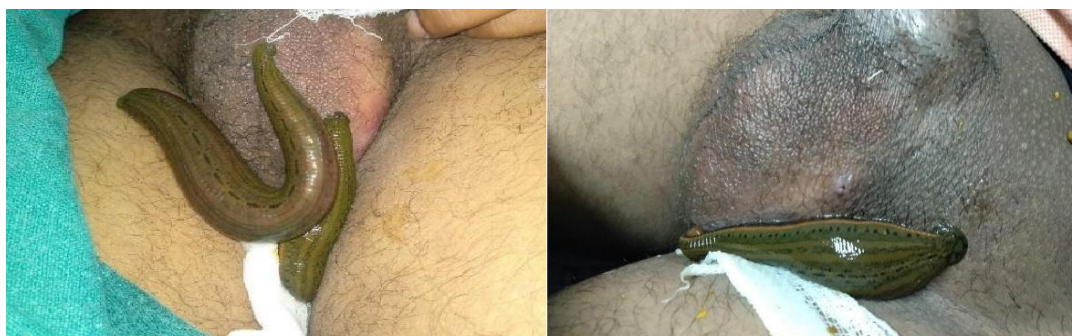


Fig. No. 2: *Jalauka* Application.

Paschat Karma

For the **Patient**

The site of the bite was cleaned using *Haridra churna* & antiseptic solution and gentle pressure was exerted for 15 minutes to achieve hemostasis.

A sterile scrotal bandage was applied. The patient was instructed to remain in the supine position with legs elevated for 30 minutes post-procedure.

After ensuring stability, the patient was discharged with advice to avoid strenuous activities and wear scrotal support /jack strap which minimizes pain and discomfort.

For *Jalauka* (leeches): After detachment, the leeches were made to vomit ingested blood (*Vamana*) by applying *Haridra* (turmeric) over its mouth and by gently squeezing its body - until they regained activity. They were then preserved for future use in the same patient.

The procedure was repeated for three more additional sittings at intervals of 7 days each, making it total of four sittings.



Fig. No. 3: Jalauka vama.

Follow-up and Monitoring

The patient was observed during and after each session for any adverse effects such as excessive bleeding, infection, or allergic reaction.

Regular follow-up was maintained throughout the treatment course to assess clinical improvement.

RESULTS

- By 2nd sitting of *Jalaukavacharana* there was
- Marked reduction in pain
- Marked reduction in swelling.
- At the end of 4th sittings patient had no pain or swelling over the scrotal region.

Malnad Hi-Tech Diagnostic Centre
ISO 9001:2015 CERTIFIED

Patient Name :: Dr. Prashanth Bhat V	Age :: 38	Gen. :: Male
Referred By :: Dr. Prashanth Bhat V	Tr. I.D. :: 1190495-1	Date :: 29/06/2023

USG SCROTUM

Right side:

- Right Testis has normal morphology and echotexture. No focal lesion seen. It measures 2.5 x 2.2 x 3.8cm.
- Epididymis is normal in morphology and echotexture. No focal lesion seen.
- Colour Doppler study of testicle and epididymis show no significant abnormality.
- There is no evidence of Hydrocoele.
- There is no evidence of Varicocele.

Left side:

- Left testis has normal morphology and echotexture. No focal lesion seen. It measures 2.0 x 2.5 x 3.4cm.
- Epididymis is normal in morphology and echotexture. No focal lesion seen.
- Colour Doppler study of testicle and epididymis show no significant abnormality.
- There is no evidence of Hydrocoele.
- Few prominent pampiniform plexus of veins measuring 2-3mm showing mild reflux on valsalva. No reflux in rest.

IMPRESSION

Left Grade II / III Varicocele.

No obvious detectable abnormality seen in bilateral testicles and epididymies.

Correlate clinically and with other investigations.
Photo-copies attached.

(Urdu note the opinion given is subject to review in the light of any new clinical information) Scan has been reported during the COVID-19 pandemic

DR. Nandankumar. channan
Consultant Radiologist

Serving for Healthy Life

Information in the reports are to the doctors referred and are not for medico-legal proceedings.
Park Extension Road, Shingga Ph. : 08182-272655, 403402, 8762887887 E-mail : emids.shingga@gmail.com

VIJAYA DIAGNOSTIC CENTRE
156 A cross, Yelahanka, New Town, A Sector, Bangalore- 560064

TEST REPORT

Name : Mr. SRINIVAS	Registered on : 18-Jun-2023 15:16
Age/Gender : 32 Years/Male	Released on : 18-Jun-2023 15:44
Registration ID : 251720001680	Printed on : 18-Jun-2023 15:48
Ref. By : Dr. AKSHAYA NURSING HOME	Regn Centre : YELAHANKA-172

DEPARTMENT OF RADIOLOGY AND IMAGING SCIENCES
ULTRASOUND SCROTUM

History :
Pain

Technique :
High resolution Ultrasonogram of Scrotum was performed using a high resolution linear transducer.

Findings:

Right testis : 4.2 x 1.8 x 2.6cm ; (Volume: 10.2ml)
Left testis : 4.1 x 2.0 x 2.5cm ; (Volume: 10.6ml)

Both testes are normal in size, shape, position and echotexture.
No focal lesions noted.

Both epididymis are normal in size, shape and echopattern.

No evidence of hydrocoele noted on either side.

No evidence of varicocele noted on either side.

Scrotal wall thickness is normal.

IMPRESSION:

* NO SIGNIFICANT ABNORMALITY DETECTED.

FOR CLINICAL CORRELATION.

DR. D UMA SHANKAR
MBBS, DMRD
Registration No: 38803

End of Report

* Suggested Clinical Correlation, if Necessary Kindly Discuss with signatory

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DISCUSSION

Jalaukavacharana (Hirudotherapy/Leech Therapy) is one of the most significant examples of invertebrate-based therapy with both historical and modern medical importance. Among the species used, *Hirudo medicinalis* in Europe and *Hirudinaria granulosa* in India - are widely recognized for their medicinal value. The latter is a freshwater leech commonly found in several Indian states including Tamil Nadu, Kerala, Madhya Pradesh, Uttar Pradesh, and Punjab.

Leeches possess specialized anatomical features, with two suckers and three jaws that create a distinct “Y”-shaped incision during feeding. Their saliva contains a diverse array of bioactive compounds responsible for multiple therapeutic effects. *Hirudin*, the most potent thrombin inhibitor, prevents coagulation and alleviates venous congestion. *Hyaluronidase* acts as a spreading factor, enhancing tissue permeability. Other constituents such as *apyrase*, *calin*, *eglin*, *saratin*, *bdellins*, and *destabilase* contribute to anticoagulant, anti-inflammatory, and vasodilatory actions. Furthermore, histamine-like vasodilators, serotonin, and steroid hormones improve local circulation, while *kininases* provide analgesic effects.

These combined properties explain the effectiveness of leech therapy in conditions associated with venous stasis and pain, including varicocele. Evidence supports its utility in venous disorders such as varicose veins and ulcers, and in microsurgery for relieving postoperative venous congestion. Experimental studies further highlight its protective role in testicular ischemia–reperfusion injury through antioxidant and anti-apoptotic mechanism

CONCLUSION

Jalaukavacharana (Leech Therapy) has demonstrated promising results in the management of varicocele, particularly in its early stages. By virtue of the diverse bioactive components present in leech saliva, the therapy effectively reduces local inflammation, venous congestion, and ischemic changes. These mechanisms not only provide significant symptomatic relief—such as reduction in pain and heaviness—but also contribute to improving local circulation and tissue health.

One of the notable advantages of this therapy is its ability to delay or potentially reduce the need for surgical intervention in selected cases of early-stage varicocele. Being a minimally invasive, outpatient-based, and cost-effective procedure, *Jalaukavacharana* offers an accessible therapeutic alternative with fewer complications compared to conventional surgical methods. Furthermore, its repeatability and ease of application make it a practical option for patients who are reluctant or unfit for surgery.

Thus, *Jalaukavacharana* can be considered as a supportive and preventive modality in the management

of varicocele. It provides a non-surgical, affordable, and patient-friendly approach that can maintain the condition, prevent progression to advanced stages, and enhance quality of life. However, further clinical studies with larger sample sizes are recommended to establish its efficacy and long-term outcomes.

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