



APPLICABILITY OF JALOUKA IN SHALYAJA VYADHI

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ABSTRACT

The basic Ayurvedic treatment is based on two principles. *Shodhan chikitsa* (Elimination Therapy) and *Shaman chikitsa* (Internal medicine). *Shodhan Chikitsa* deals with five Purificatory Procedures popularly known as *Panchakarma*. *Acharya Susruta* included *Raktamokshana* in *Panchakarma* and described it as the best procedure because it eliminates all three vitiated *Doshas* -*Vata*, *Pitta* & *Kapha*. *Jalaukavacharana* is a type of *Raktamokshana* where *Jalauka* are used for *Raktamokshana* (bloodletting). This is considered as the unique method of *Raktamokshana* as vitiated *Doshas* are removed from the body without using any sharp instruments, so, *Raktamokshana* by means of '*Jalauka*' comes under *Ashastra* category. *Rakta* vitiated by *Vaat Pitta Kapha* should be removed from the body by using *Sringa*, *Jalouka*, *Alabu* respectively. Method of removing blood from the body using *Jalouka* is considered as the easy and convenient method so it is mainly indicated in Old, fearful, women weak persons, delicate persons.

KEYWORDS: *Jalouka*, *Jaloukacharana*, Leech therapy, *Shalyajavyadhi*.

Nirukti of Jalayuka— *Jala*-water, *Aayu*— Life

A Creature, whose life is water, a creature, whose habitat and life is water is called *Jalauka*.^[4]

INTRODUCTION

The first description of *Jalaukavacharana* (leech therapy) is available in *Sushruta Samhita*, *Sutrasthana* (800 B C). *Jaloukacharan* or Medicinal leech therapy is an old technique of blood letting and is mainly indicated in various diseases such as *Dushtavrana*, *Vranashopha*, *Mukhadoshika*, *Sirajagranthi*, *Arsha*, *Khalitya*, *Indralupta Visarpa*.^[1] Recently, many researchers have proved that leech saliva has a variety of bioactive compounds including anti-thrombin (Hirudin, bufrudin), antiplatelet (calin), factor Xa inhibitors, antibacterial and other property.^[2] Leech's saliva contains many biologically and pharmacologically active compounds that exert anticoagulant, antiplatelet, anti-inflammatory, and anti-edema effects in the host's body.^[3]

Leech modern view

Phylum— Annelida

Class— Hirudine

Scientific name — *Hirudo medicinalis*

Habitat-Water

Types of *Jalouka*: 12 types^[5]

6 *Savisha* — *Krishna*, *Karbura*, *Alagardha*, *Indraudha*,

Samudrika, *Gochandana*^[6]

6 *Nirvisha* — *Kapila*, *Pingala*, *Sankhamuki*, *Mooshika*, *Pundareekamuki*, *Savarika*^[7]

Precaution during *Jalaukacharana*

BT and CT, HB%, HIV I II, Hbsag, HCV of the patient should be normal.

Points to remember for *Jalaukaacharana*^[8]

1. *Sthanika Snehana* and *Swedana* are needed before *Jalaukaacharana*
2. *Jalauka* should be applied in *Pratahakala* (morning hours). Because in *Madyahn* (afternoon) there will be *Pitta Prakopa* and in night *Vata Prakopa* will be there, so circulation will be fast and there is chance of *Atirakta Sravana*.
3. Avoid applying over *Sira*, *Stana*, *Shishna*, delicate organs.
4. Up to 2 years of age use of 1 *Jalauka* and for rest 6-10 *Jalaukas* can be used.

Procedure of *Jalaukavacharana*

A) *Purvakarma*

Before the application of *Jalauka* on target site, it should

be dipped in *Sarshaparajani kalkodaka* and kept in fresh water for one *muhurtha* (approximately 45 minutes). The patient's skin is cleaned thoroughly with water.^[9]

B) *Pradhan karma*

Patient for *Jalaukaavacharan* should be in sitting posture or lying down posture. Then that *Jalauka* is applied to the affected part of patient. *Jalouka* should be applied on desired site and its body to be covered with gauze dipped in cold water. If *Jalauka* refuses to suck, small prick to be made at the desired site by using sterile needle so that drop of blood is produced and leech attaches to the site quickly.

The *Jalauka* when start sucking from the affected part, its mouth assumes the shape of horse shoe and raised and arched position of their necks after they had attached. While sucking is started the leeches should be constantly covered with gauze piece dipped in cold water.

If sensation of itching and pain at the site of application than it has to be assumed that the *Jalauka* is sucking pure blood (*Rakta*), when it begins to suck pure blood (*Rakta*), it should be removed if it does not leave off easily then powder of *Saindhava* (Salt) or *Haridra* (Turmeric Powder) should be sprinkled over its mouth.^[10]

C) *Paschat karma*

After detachment of *Jalouka*, bleeding from wound (*Jalauka* site) is checked by application of tight bandage along with application of *Shatadhauta ghrita*.^[11] For the emesis of *Jalouka* *Haridra choorna* to be used. When we pour *Haridra choorna* on the mouth of leech then leech vomit all sucked blood (*Rakta*) so that we can again use same leech in same patient in next sitting. After 7 days.^[12]

Constituents of Leech saliva and Probable mode of action of *Jalaukacharana*^[13]

Jalauka lives in cold places and is of *Madhur rasa*. So it is useful in vitiated *Pittaj* and *Raktaj Vyadhi* (Disorders). The use of Leech for medicinal purposes is due to the chemical contents present in Leech saliva.

The saliva of Leech contains chemicals which act as anaesthetic, which makes the bite of Leech painless to the host, anti-coagulant and anti-inflammatory, vasodilators which increase the blood flow to the feeding areas by causing vasodilatation and enhance wound healing, promotes circulation and have chemical substance which cause increase absorption of fluid in body. *Jalauka* sucks impure blood from capillaries of affected site and prevents oedema, inflammation, promotes circulation and helps in healing.

Saliva of Leech contains following bioactive substances^[14]

- (1) Hirudin: It has anti-thrombotic activity and inhibits blood coagulation. This improves blood flow to

compromised tissue areas and prevent blockage in blood vessels. So Leech Therapy is useful in prevention and treatment of thromboembolic diseases like angina pectoris, atherosclerosis.

- (2) Calin: It inhibits blood coagulation by blocking the binding of von Willebrand factor to collagen. It inhibits collagen mediated platelet aggregation and is responsible of slow cleansing of wound by maintaining secondary bleeding for some hours.
- (3) Destabilise: Monomerizing activity. It dissolves fibrin and has thrombolytic effect. It completely blocks the spontaneous aggregation of human platelet.
- (4) Hyaluronidase: It is a protein enzyme. It facilitates degradation of connective tissues around the bite site and acts to clear the path for active and healing substances to penetrate.

Applicability of *Jalouka* in *Shalyajavyadhi*

1) *Dushvrana* (Non Healing Ulcer)

Dushta vraneshu kartavyamurdhva aadascha shodhanam visoshanam tatha aaharah shonitasya cha mokshanam.^[15]

Dushta Vrana as a severe wound with characteristics like an irregular opening, intense pain, and extensive discharge, emitting a foul smell. The condition is marked by severe, burning pain and an unpleasant appearance.^[16] *Acharya Sushruta* has mentioned *Raktamokshana* in *Dushta Vrana* Leech therapy, practiced by our *Acharyas* for centuries, is now gaining significant recognition due to its ability to address venous insufficiency, restore venous outflows, manage pain, and promote wound healing in both infected and non-infected chronic wounds.

2) *Sirajagranthi* (Varicose vein)

Shira Sankocha, Shira Vakrata, Shira utsedha and *Vishoshana* are the clinical characteristics of *Siragranthi*. Features are beneficial in associated *Siragranthi* with varicose veins. Varicose veins occur due to vitiation of *Vata* and *Pitta dosha*, which results in vitiation of *Rakta dhatu* and *Sthansamshraya* in *Raktavaha Srotas*, which triggers signs and symptoms of *Siragranthi*. The secretion of salivary glands of medicinal leech includes more than one hundred bioactive substances which are responsible for performing the desired medical effect.^[17]

3) *Arsha* (Thrombosed haemorrhoid)

Avarthamana uchrana kathinebyo haredrasruk Arshobhyo Jalaja shastra suchi karchaih punah punah^[18]

A thrombosed hemorrhoid is a variety of external hemorrhoid where a clot is formed in one or more veins situated in the anal skin resulting in painful swelling in the anal tissues. It becomes an emergency condition when the pile mass gets strangulated. *Jaloukavacharana* is known to be effective in thrombosed hemorrhoid as it relieves venous pooling of blood in that area by

dissolving the clotted blood.^[19]

4) Vranashopha (cellulitis)

Aadhou vimlapanam kuryat dviteeyam avasechanm.^[20]
Avasechanam jaloukadibhi raktavisravanam
(Dalhana)^[21]

Cellulitis is a spreading inflammation of subcutaneous tissue and fascial planes. Infection may follow a small scratch or wound or incision or insect/snake/scorpion bite. Common in face, lower limbs, upper limb, scrotum wherein subcutaneous tissue is lax.^[22] Cellulitis is associated with Vranashopha in Ayurveda. Jaloukacharana in the treatment of Vranashopha gives tremendous relief from Vedana, Daaha, Shopha.

5) Khalitya^[23] (Baldness)

Khalitya is Tridosha vyadhi - Vata, Pitta, Kapha with Rakta Dosha. In Khalitya, hair fall occurs and new hair does not appear that leads to baldness. All Doshas are vitiated but have predominance of Pitta and Rakta Dosha mainly. Application of leech is a method where impure blood is removed from body which balance Pitta, Rakta, Vata Dosha opens the blocked hair follicle which helps in growing new hair follicle and hair.

6) Mukhadooshika^[24] (Acne Vulgaris)

Mukhadooshika is described as one among the 44 Kshudraroga in Sushruta Samhita. It is Kapha vata raktapradanavyadhi characterised by Shalmalikantakavat pidaka. Ghana, Saruja and Medogarbhapudaka are present in the Mukhapradesha of young aged people. Similar features are found in the disease, Acne vulgaris and hence Mukhadooshika can be correlated to Acne vulgaris. Raktamokshana is one of the therapeutic interventions explained as the line of management of Kshudra roga in general. Raktamokshana in the form of Jalaukachavarana as a shodhanachikitsa as it a Raktapradoshajanyaroga.

7) Visarpa^[25] (Herpes zoster)

Visarpa is an acute condition with quick spreading involving mainly Tvaka, Rakta, Mamsa due to vitiation of all three doshas. as the basic nature of the disease is Rakta and Pitta predominant, Jalaukacharana in the form of Raktamokshana helps in relieving the condition.

8) Keloid^[26]

Keloid is a condition of proliferation of fibroblast, collagen fibrils and immature blood vessel usually on a pre-existing scar. It has claw-like processes which is smooth, pink and raised patch as well as unsightly, often tender to touch and always itching tendency. Leech therapy is beneficial in reduction of pain, tenderness, itching in the patients of Keloid. We can avoid the hazardous of prolong use of Steroid drugs by using leech therapy.

9) Indralupta^[27] (Alopecia areata)

Vitiated Pitta in association with vitiated vata causes the falling of hairs from the scalp. After that vitiated Rakta

and Kapha dosha block the orifices of the hair follicles which restricts the growth of new hair, this Vata, Pitta, Kapha along with Rakta causative factors of Indralupta. Jalaukacharana removes the aavarana caused by Dosha further helps in growth of new hair follicles.

DISCUSSION

Method of removing blood from the body using Jalouka is considered as the easy and convenient method.

Blood vitiated by Vaat Pitta Kapha should be removed from the body by using Sringa, Jalouka, Alabu respectively. Jalouka is ideal to remove blood vitiated by Pitta.

Jalouka are 12 types among them 6 are Savisha (Poisonous leech) and 6 are Nirvisha (non poisonous leech).

There are so many causes of chronic ulcer, some of them are recurrent infections, trauma, poor blood supply, hypoxia, loss of sensation. Leech therapy gaining significant recognition due to its ability to address venous insufficiency, restore venous outflows, manage pain, and promote wound healing.

Due to the qualities of its anticoagulant, vasodilator, thrombolytic, anti-inflammatory substances, accelerate the thrombolytic activity in the thrombosed haemorrhoids and thereby decongestion occurs.

Leech therapy is beneficial in reduction of pain, tenderness, itching, and swelling in the patients of Keloid.

Leech therapy in Cellulitis not only rapidly alleviate local inflammation, infection, edema, redness and temperature immediately but also prevent complication.

CONCLUSION^[28]

Jalaukacharana is adopted mainly in Pitta Dosha predominant diseases. Jalaukacharana is one of the best Anushastra Chikitsa used mainly in Rakta Pradoshaja Vyadhis. Though the action is localised, but it affects whole body by releasing many factors into blood.

Jalaukacharana is cost effective and easily adopted for patients.

Leech is one of the most beneficial and delicate treatments. It is a short procedure without obstructing patient's daily routine.

Pre-surgery precautions like Anaesthesia, antibiotics are not necessary and also can be done on opd basis.

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