

# A Conceptual Review of Jalaukavacharana

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**Abstract**— *The basic Ayurvedic treatment is based on two principles viz. 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 viz. Vata, Pitta & Kapha. Jalaukavacharana or Leech therapy is medicinal leech therapy that is used in a variety of inflammatory Conditions. It is indicated in Raktaja and Pittaja Vikaras. Its mode of action depends on the injection of Leech saliva into the patient's tissues during the process of blood-sucking. The following paper deals with the basic concepts of Leech Therapy and the method of using leeches for Raktamokshana.*

**Index Terms**- Ashastra; Jalaukavacharana; Panchakarma; Raktamokshana; Shodhan.

## I. INTRODUCTION

Leech therapy or Jalaukavacharan is an ancient Ayurvedic bloodletting technique that has the great potential to manage many inflammatory, ischemic, and Infectious diseases. 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. According to Ayurveda the disequilibrium of Tridoshas viz. Vata, Pitta, and Kapha are the root causes of all the diseases. Even the definition of health in Ayurveda focuses on the equilibrium of the Doshas, Agni, Dhatu & Mala. Hence, the basic Ayurvedic Treatment is also based on two principles viz. Shodhan

chikitsa (Elimination Therapy) and Shaman Chikitsa (Internal medicine). While in Shodhan Chikitsa the vitiated Doshas are Expelled out of the body by the means of Panchakarma. According to Acharya Sushruta the Panchakarmas are Vamana (emesis), Virechana (purgation), Basti (enema), Nasya (instilling Medicines through the nose) and Raktamokshana (bloodletting). Among these five, Acharya Sushruta has described Raktamokshana as the best procedure Because it eliminates all three vitiated Doshas viz. Vata, Pitta and Kapha.

## II. MATERIAL AND METHODS

All the material related to this article has Been collected from Classical Ayurvedic texts like Brihatrayi and Laghutrayi; Indian material media. Various published research articles on Leech therapy were also searched for in this conceptual Study.

Jalauka definition

Nirukti of Jalayuka – (definition of leech) <sup>1</sup>

Jala – water

Aayu – Life

As they are accustomed to water, they are called Jalayuka.

The word leech comes from an old English Word 'laece' meaning 'physician'. In medieval England, leeches were linked with healing because of The etymology of the word.<sup>2</sup>

Leech types: -

Types of leeches: 12 types <sup>3</sup>

6 Poisonous – Krishna, Karbura, Alagardha, Indraudha, Samudrika, Gochandana

1. Krishna: Black {similar to that of powder of Anjana (Antimony)}, large-headed
2. Karbura: Grey, broad like Varmimatsya (fish), Abdomen is segmented and bulging.
3. Alagarda: hairy with large flanks and a black mouth.
4. Indrayudha: have stripes on their back.
5. Samudraka: blackish yellow; has flowery patterns on the body.
6. Gochandana: the lower part is divided into two halves Like the scrotum of a bull and with a very small mouth.

Bite of these six kinds of leeches leads to Profuse swelling, itching, fainting, fever, burning Sensation, vomiting, toxicity, and debility.

6 Non-Poisonous – Kapila, Pingala, Sankhamuki, Mooshika, Pundareekamuki, Savarika

1. Kapila: Dark brown colored with Slightly reddish flanks (like Manashila); back is unctuous (oily) and has the color of Mudga (slightly green).
2. Pingala: Reddish brown with a round body and moves quickly
3. Shankumukhi: Brown color (like Liver), sucks Blood quickly, and has a long and Pointed mouth
4. Mushika: Brown color, resembles the Shape of mice, and has an Unpleasant odor.
5. Pundarikamukhi: Greenish color (like Mudga) With broad mouth (like lotus Flower).
6. Savarika: Reddish pink color (like lotus Petal), oily; eighteen Angula (36 cms.) long & are Used to treat cattle

These Nirvisha leeches are found in provinces Like Yawana (Arab countries), Pandya (South India), Sahya (Central India), and Pautma (region around Mathura in Uttar Pradesh).

Leech modern view

Phylum – Annelida

Class – Hirudinea

Scientific name – Hirudo medicinalis

Indications for Leech Therapy <sup>4,5</sup>

Blood vitiated with pitta dosha

children, old aged, Frightful, debilitated, women, and persons with tender Constitutions,

Diabetic ulcers, Varicose veins, Sciatica, Vatarakta, Acne, Chronic skin conditions like eczema, psoriasis, Herpes, poison, Abscess, Tumors of the abdomen (Gulma), Haemorrhoids, Diseases of the neck and eyes

Therapeutic Action of Jalauka Therapy:

Anti-inflammatory

Analgesic (reduces pain)

Increases blood circulation

Thrombolytic (dissolves blood clot)

Antimicrobial activity

Contraindications of Leech Therapy <sup>6,7</sup>

Absolute Hemophilia, Anticoagulant medication eg. Warfarin, Heparin, Marcumar. (Aspirin and Clopidogrel Are not contraindicated), Severe Anaemia, Erosive gastritis, and potential gastrointestinal Bleeding, during chemotherapy (or people who are on Immunosuppressive medication) Individuals with HIV infection Severe allergic diathesis (allergy to foreign Proteins), Hypotension, Active tuberculosis, Pregnancy, Mental disorders during acute episodes, severely ill and bedridden patients Extremely fearful patient.

Procedure of Jalaukavacharana

1. Purvakarma

1. Collection and preservation of leeches,

2. Examination of a patient: - a patient is Selected and his general health is examined. Contraindicated conditions should be ruled out.

3. Shodhana of leech: Before use, leeches Are smeared with a paste of mustard and turmeric, which acts as a disinfectant and increases their Appetite and blood-sucking ability. The disinfected Leeches are kept in a fresh jar of water for half an Hour before use and the use of disinfectant or soap Should be avoided.

4. Prepararion of patient

2. Pradhana Karma

1. The patient for Jalaukaavacharan should be in a sitting posture or lying down posture.

2. Then the leech should be applied By Haridra and Sarspa Kalpa and put into the pot having Clearwater for some time to know that the leech is free From Mada. Then that leech is applied to the affected part of the patient.

3. If in the affected part leech doesn't hold or Suck, then either a milk drop should be applied or a small Scratch should be made to drain a little drop of Blood.
4. If the leech doesn't suck by the above methods, then Another leech should be used.
5. When it starts sucking the blood, elevates its neck assuming the shape of a horse shoe<sup>5- 10</sup> Leeches are applied at a time depending upon the necessity.
6. Once Leeches start sucking blood, they are covered with wet gauze & cold water is poured on them from time to time, to Make leeches comfortable during sucking. If a leech Refuses to bite on its own.
7. The Jalauka First sucks only the vitiated blood. Itching or pricking Pain at the site of the application indicates that the leech Is now sucking pure blood.
8. When sucking pure Blood leech should be removed. If it does not Withdraw, a little turmeric powder or common salt Powder should be sprinkled on the sucking part of the leech. Leeches normally absorb about 5 -10 ml of Blood.

#### Precaution <sup>8</sup>

1. Leeches should not be too major veins like Femoral or Jugular veins and delicate parts like Breast, Penis, or Eyelids.
2. Used Leeches should be kept in separate jars.
3. Local Snehana and Swedana are needed before the Jalauka application.
4. Jalauka should be applied in Pratahakala (morning Hours). Because in the afternoon there will be Pitta Vriddhi and, in the night, Vata Prakopa will be there, so Circulation will be fast and there is a chance of Ati Rakta Sravana.
5. Avoid applying over Sira, Stana, Shishna, etc. Delicate organs.
6. Up to 2 years use of 1 Jalauka and for rest 6-10

Jalaukas can be used. Paschata karma (after procedure) <sup>9</sup>

1. Patient care: After the removal of the leech, blood Should be allowed to flow from the wound for a few minutes. The site is cleaned with Savlon or normal Saline.
2. Turmeric powder or Satadhauta Ghritha, a Classical Ayurvedic herbal ghee preparation can then Be applied to promote healing. The wound is

then Lightly bandaged for 6 to 12 hours to arrest the Bleeding (if the oozing from the wound is not Stopped, it can be sealed with the help of tincture Benzene) sips of lime water, soup or glucose water Can be offered to the patient.

3. Care of leech: After falling off, the leeches should be Made to vomit. This is carried out by applying Turmeric powder to their mouths. When the blood Comes from the anterior sucker, gentle squeezing from the caudal to the front end is required for proper Emesis.
4. If the leech is active when placed in water, it Indicates that the vomiting is proper. The used Leeches are kept in separate jars/pots labeled with the details of the patient. The leech should be applied Once a week and one leech should be reserved for a particular patient to avoid cross-infection.

#### Mode of Action of Jalaukavacharana

The action of leech is due to the biological Substances present in saliva. This saliva contains More than a hundred bioactive substances, which Include an anti-platelet aggregation factor, Anesthetic, and anti-inflammatory and antibiotic Agents. These agents anesthetize the wound area Making the bite of the leech painless to its host and dilating Blood vessels to increase blood flow to the site of the Bite.

Hirudin, Hyaluronidase, Calin, Destabilase, Hirustasin, Bdelins, Tryptase inhibitor, Eglins, Factor Xa inhibitor, Complement inhibitors, Carboxypeptidase A inhibitors, Histamine substances Acetylcholine. <sup>10</sup>

#### Complications, Treatment

Complications due to using poisonous leech Irritation, itching, bleeding, rashes, and fever.

Treatment: - Mahagrutha' can be applied internally and externally.

#### CONCLUSION

Jalaukavacharan (Leech therapy) is useful in many acute and chronic disorders. Jalaukavacharana is adopted mainly in Pitta Dosh. Predominant diseases. Jalaukavacharana is one of the best Anushastra Chikitsa, and it is used mainly in Rakta Pradoshaja Vyadhis. Though the action is localized, it affects the whole Body by releasing many factors into

the blood. Jalaukavacharana is safe as it can be used in Communicable diseases due to the presence of specific factors in it. Jalaukavacharana is less consuming cost effective and easily adopted for patients. Leech is one of the most beneficial and delicate Treatments. It is a very cheap and short procedure Without obstructing the patient's daily routine. The Leech application is the best one because it's Delicate easily applicable, easily available, quick Reliever, and purificatory. Pre-surgery precautions like Anaesthesia and antibiotics Are not necessary and also patient can leave the Hospital in no time. A patient does not ever feel that a major surgery is Done with him. Leech is a sort of boon in rural areas. It is the best Para Surgical and cosmetic instrument. In short indigenous Leech despite its meagre Form is very famous in the medical field. it can be concluded that over the years the use of leeches has evolved from a Simple bloodletting procedure into a scientifically Based physiologic process with rational defined Clinical applications.

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