

REVIEW ARTICLE ON *JALAUKA* AND *JALAUKAAVCHARNA*

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## ABSTRACT

The term *Jalauka* (leech) may be etymologically interpreted to mean creature whose life (*Ayu*) or whose longevity is depends upon water, whereas the derivative meaning of the term *Jalauka* is based upon the fact of their dwelling (“oka” – dwelling place) in water (*Jalam*). A creature whose life is water called *Jalauka*. *Jalauka* is having various names which are – *Jalayuka*, *Jalaua*, *Jaluka* etc. There are two types of treatment, advised in *Ayurveda* - 1. *Shamana* (internal medicine) 2. *Shodhana* (internal purification). Leech therapy (*Jalaukavacharana*) takes a pride of place in the list of *Panchakarma* like *Shodhana Chikitsa*. *Jalauka* is the only *shodhana* treatment that can be done on rich, weak, fearful, sophisticated, old& in case of ladies and children. Due to its sophisticated nature. The knowledge of *Jalaukavacharana* is as old as the *Ayurveda*. It is described in *Rigved*, *kaushik sutra*, *VinayPitak*, *CharakSamhita* and *Sushruta Samhita*. *Sushruta* give a detailed description of the Leech and Leech therapy. Modern medical science also describes it in detail. There are two types of Leeches six poisonous (*savisha*) and six nonpoisonous (*nirvisha*). *Nirvishajalauka* are strong and large Ready suckers, Greedy (*Mahashana*), *Saivalashya-va* (*Varna*), *Vrutta* (round), Blue colored. *Acharaya Sushruta* gives a detailed description of the collection method, collection time, and preservation methods. Leech therapy or *Jalaukaavcharana* is mainly indicated for *Pittaja* and *Raktaajavikara as vidradhi* (Abscess), *gulma* (Abdominal swelling) *arsha* (Piles), *kushtha* (Skin disease) etc. *Sushruta* describe the method of application of leech in details dividing it into three parts namely *Purvakarama*,

*Pradhankarama and Pachchatkarama*. Modern scientists and physicians also describe Leech and leech saliva having properties of antibiotics, anesthetic, antiseptic, anticoagulant.

**Keywords:** *Raktaja Roga, Panchakarama, Ayurveda, Pradhan karma, Jalauka.*

## INTRODUCTION

A creature having its habitat and life as water is *Jalauka*. A creature whose life (Ayu) or whose longevity is depends upon water, whereas the derivative meaning of the term *Jalauka* is based upon the fact of their dwelling (“oka” – dwelling place) in water (Jalam). *Jalauka* is having various names which are – *Jalayuka, Jalaua, Jaluka, Jalaluka, Jaalalauka, Jalita, Jaloka, Jalauga, Jalatani*.

*Raktamokshana* can be done by *Jalauka* in those who are rich, weak, fearful, sophisticated, old & in the case of ladies and children. This is mildest in all the methods used for bloodletting, for which it is called the best *Paramsukumarupaya*.<sup>2</sup>

In *Ayurveda* medicines are indicated for both purposes prevention & cure there are two types of treatment, advised in *Ayurveda* -

1. *Shamana* (internal medicine)
2. *Shodhana* (internal purification)

Leech therapy (*Jalaukavacharana*) takes a pride of place in the list of *Panchakarma* like *ShodhanaChikitsa* from the sunrise of medical history.

Acharya Sushruta has described *Jalauka* under the heading of *Anushastra* (Para sharp instrument).

According to *Ayurvedic* texture, only one sort of Leech is found as medicinal use, which exists in water. *Jalaukavacharana* is claimed to be the supreme therapy because of its high effectiveness in curing blood-related disorders. It is much safe and less com-

plicated natural process, therefore, indicated even for the king, rich, old, fearful, weak, women and the people of tender nature.

### History-

1. The knowledge of *Jalaukavacharana* is as old as the *Ayurveda*.
2. Reference regarding the eradication of the disease form “*Usniha*” (arteries) is mentioned in *Rigveda*. This process mostly resembles *Raktamokshana*.
3. The method of application of leech for blood-letting is mentioned in *Kaushika Sutra* which is a *sutragrantha of Atharvaveda*.
4. *Acharya Charaka* has enumerated *Raktajaroga* and their treatment by *Shonitavasechana*.<sup>5,6</sup> and various means of *Raktamokshanais* also mentioned 7
5. *Acharya Sushruta* has dealt in detail with *Raktamokshana* and its type. He described a special chapter for *Jalaukavacharana*. The types of *Jalauka*, their habitat, etc. have been described the first time in detail in this chapter.

### Classification-

Acharya Sushruta has classified *Jalaukas* into two main categories.

1. *Savisha* (Venomous)
2. *Nirvisha* (Non-venomous)

Each category again includes six varieties of *Jalauka* <sup>8</sup>

<b>SavishaJalauka (Poisonous)</b>	<b>NirvishaJalauka (Nonpoisonous)</b>
<i>Krishna</i>	<i>Kapila</i>
<i>Karbura</i>	<i>Pingala</i>
<i>Algarda</i>	<i>Sankumukh</i>
<i>Indrayudha</i>	<i>Mushika</i>
<i>Samudrika</i>	<i>Pundarikamukhi</i>
<i>Gochandana</i>	<i>Savarika</i>

**Savisha Jalauka:** The Savisha Jalauka originates in the decomposed urine and fecal matter of toads and poisonous fishes in ponds of stagnant turbid water. Whereas *Nirvisha Jalauka* originally grows in decomposed vegetable matter, as the purified stems of the several aquatic plants known as the *Padma*, *Utpala*, *Nalina*, *Kumuda*, *Pundarika*, and common zoophytes, which live in clear water.

**Geographical Distribution:** According to *Sushruta*, the leeches are found in *Yavana* (Turkesthana) *Pandya* (south region country – Deccan), *Sahya* (the tract of land traversed by the *Ghant* mountains), *Pautana* (modern Mathura).

In *Sushruta Samhita*, it is described in detail. The collection of leeches is very simple. Acharya Sushruta has told that the leeches can be caught with a piece of wet leather, in tanks, streams, and where there are lotuses. There is another method to collect the leeches i.e. the fresh meat of dead animals, fish or milk must be applied on the thigh of an animal or the human being himself, may apply on his thigh and keep the thigh in the water for some time. *Jalauka* will attract and will catch the place. Then remove them from the skin of the person with the application of *Saindhava* (rock salt) and collect.<sup>4,11</sup>

*Acharya Dalhana* has mentioned that the best time for collecting leeches is *SharadRitu* (Autumn). On every third day, the water should be changed, and feeding should be dropped inside the pot. After seven days the pot should be changed. *Acharya Vagbhata* mentioned that the pot should be changed every five days.<sup>10</sup>

### Indications and Contraindication

#### Indication

Leeches are sheet in nature so commonly used in *pit-taj* and *raktaj* disorders. Leeches first suck the impure blood then the pure so when the patient feels pricking pain and itching over the bite place leech should be removed.<sup>9</sup> *Vidradhi* (Abscess), *Gulma*, Acute venous congestion<sup>19</sup> (Abdominal swelling), *Arsha* (Piles), *Kushtha* (Skin disease), *Vatarakta* (Gout), *Krostrukashirsha* (Infective arthritis), Osteoarthritis Arthritis<sup>20,21</sup> *Kanharoga* (Goiter), *Netraroga* (Eyediseases), *Granthi* (Nodular swelling), *Arbuda* (Cancer), *Shlipada* (Filaria), *Vidarika* (Crack), *Vi-*

*shadamshttra* (Insectbite), *Visharpa* (Erysipelas), *Siro-roga* (Diseases of scalp), hemorrhoid<sup>24</sup>, Lipodermatosclerosis<sup>22</sup>, *Vicharchika*<sup>23</sup>.

#### Contraindications

- *Sarvangashotha* (Generalized edema)
- *Udarroga* (abdominal diseases)
- *Shosa* (Tuberculosis)
- *Ksheena* (Emaciation)
- *Garbhini* (Pregnancy)
- *Pandu* (Anemia).

#### Method of Application

##### *Purva Karma*

- Proper *snehana* (oleation) and *swedana* (sudation) of the patient
- Purification of Leech by pouring the Leech in water mixed with turmeric powder.
- Part preparation – Cleaning of part of the body to which leech is going to be applied.

##### *Pradhana Karma:*

Before application prick the skin with a sharp and sterile needle so that drop of blood comes out then applied the Leech through its front end and covers the leech by wet cotton. If the leech is not ready to suck the blood from the body part then the application of *Madhu*, *Ghrit*, or butter should be done.

##### **Observation of leech:**

1. Gradual distension in the central portion of the body.
2. Itching and burning sensation at the site of the bite.
3. Pulsations on the body of leech may be visible.
4. Removal of Leech: After 30-70 minutes the leech is removed by itself, or by application of turmeric powder on the mouth of the leech.

##### **Paschata Karma:**

Care of wound - After detachment of leech there is a triangular wound created by the mouth of the leech. The blood comes out from the wound. The bleeding from the wound is checked by the application of tight bandaging with the use of *Yastimadhu* or turmeric powder.

Induction of emesis the leech that is applied to the lesion undergoes the process of *Vamana* so that the same leech can be applied next time to the same pa-

tient. For the *Vamana* of the leech, turmeric powder is applied over the mouth of the leech. The leech vomits out all the blood sucked by it to get purified. Sometimes pressing of Leech from caudal to the front end is required for proper emesis.

#### **Complications of Leech therapy**<sup>13, 14, 15</sup>

Leech therapy rarely ever leads to serious complications. The local pain of treatment and short-term itching are regular side effects. Before treatment, the patient should be advised accordingly and asked to sign a consent form describing the relevant side effects. Some of the possible reported complications are:

**Local pain** - Perceptions of the local pain of leeching vary. Most patients describe a local dragging pain that occurs immediately after the leech bites and persists for around one to five minutes. As more and more saliva is introduced into the tissues, the anesthetic effect of leech saliva begins to take effect.

**Local itching** - Transient itching at the site of the leech bite in the first few days after treatment is very common and should not be mistaken for an allergic reaction.

**Septicemia and gastroenteritis** - The infection caused by bacteria *Aeromonashydrophilia* present in the gut of Leech, which can cause pneumonia, septicemia or gastroenteritis.<sup>16</sup>

**Allergic reactions** - such as itching followed by burning and blister formation

**Ulcerative necrosis** due to toxins present in Leech saliva

**Blood loss**- Leech therapy is always associated with a certain degree of blood loss, which is clinically irrelevant in most cases. In the clinical trial by Michalsen, the mean hemoglobin loss was 0.7 mg/dl, and clinically relevant blood loss did not occur in any of the patients studied.<sup>17</sup>

**Hypotension and vasovagal attack**- Patients with a history of developing vasovagal attacks or syncope (fainting) before other invasive treatment methods may also develop such a reaction at the start of or during leech therapy.<sup>18</sup>

## DISCUSSIONS

Description of *Jalaukaavcharan* or Leech Therapy is available since *Vedic* Period and till date its importance is remain same beside huge development in modern science and modern technology. It is used mainly in *Rakta* and *Pitta* dosage *Vayadi* (disease). Due to its increasing importance in Medical field, many research articles are published on lifestyle, types, food habits and habitats of Leech. Also, researches are done on contents of saliva of leech, and indication, contraindications, and complication of leech therapy.

Presently practically Leech Therapy is used in several diseases as in case of Acne, Psoriasis, Osteoarthritis, Piles, Varicose vein, and Hair fall. But before application of leech investigation like CBC, HBsAg, AntiHCV, HIV and VDRL must be done for the safety of doctor himself and his assistant or co-workers.

In the present situation due to lack of knowledge it is very difficult to distinguish between *Savish* (Poisonous) and *Nirvesh* (Non-poisonous) by physical feature of leech except we can collect the Leech from pure water ponds or other pure water sources. Good news is that no such cases of poisonous leeches are documented all over world till date except small issues due to putting over-leeching.

## CONCLUSION-

In *Ayurveda*, *Shodhana Chikitsa* has given more importance than *Shamana Chikitsa* because it removes the disease from its root, but it is contraindicated in *garbhani*, *viridha*, *balak* and *sukumar* except for *Jalaukaavcharan*. It is mainly indicated in the case of *raktaja* and *Pittaja* originated disease. No doubt this the procedure is time-consuming, but it is with the least invasive procedure than other surgical procedures with excellent results.

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