

A CRITICAL REVIEW JALUKA AVACHARANA ON ARSHA

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ABSTRACT

Haemorrhoid is a fairly common disease all over the world. A statistical data has proclaimed that good percentage of the population above the age of fifty have minimal or significant Haemorrhoids. *Ayurveda*, the science of life, has also studied this disease with all its regards. A wide spectrum of description is available including its definite etio-pathogenesis and a number of treatment methods. According to *Ayurveda* the disease comes under the heading of *Maharogas* as it is: *Dirghakalanubandhi*, *Dushchikitsya* in nature and *Tridoshic* and involves the *Marma*.^[1] *Arsha* occurs in *Gudabhaga*, which is undoubtedly a *Marma*, and it is well known for its chronicity and difficult to treat. Since the dawn of civilization this problematic disease is not uncommon. If not treated properly or neglected, it may lead to complications such as Strangulation, Thrombosis, Pyaemia, Fibrosis, Suppuration, Haemorrhage etc. Amongst these complications thrombosis needs due to congenicance owing to the limitations of surgical maneuvers as well as failure of palliative therapeutic measures which produce ulceration, Gangrene, Fibrosis etc. *Acharya Sushruta* has mentioned four lines of management such as: *Aushadha*, *Kshara*, *Agni*, *Shastra*, *Raktamokshana*.^[2] Apparently, this approach seems to be graded on the basis of particular symptom complexes of the disease.

The summarized *samprapti* of *arsha* is illustrated below

Nidana

- *Agnimandya Mala sanchaya* (*Sanchaya* stage)
- *Kostha, Apana vayu kopa* (*Prakopa* stage)
- *Pradhana Dhamani Gudavaleetrayam* (*Prasara* stage) & (*Sthana sansraya* stage)
- *Arshotbhava* (*Vyakti* stage)
- *Dosha* Involvement *Vata Pitta Kapha Shonita Sannipataja* (*Bheda* stage)^[3]

Medical treatment

A number of drugs are mentioned in the *Ayurvedic* classics not only for oral administration but also for local application. *Acharya Charaka* has mentioned the treatment of *Shushkarsha* and *Raktarsha* separately. For the treatment of *Shushkarsha*, so many formulations have been mentioned viz.^[4] *Snehana*, *Svedana*, *Lepana*, *Dhupana*, *Varti*, *Avagahana*, *Raktamokshana*, *Basti*, *Takrapana*, *Choorna*, *Arishtha*, medicated *Ghruta*, *Mamsarasa* etc. In case of *Raktarsha* if it is *Vatanubandha*. In case of *Raktarsha* if it is *Vatanubandha* should be treated with *Snigdha* and *Shita* drugs as well as the dietetic regimens having similar qualities *Kaphanubandha Raktarsha* should be treated with *Ruksha* and *Shita* drugs along with similar dietetic regimens. In *Raktarsha*, if the blood is more vitiated one should not stop the bleeding, but if the blood is not

vitiated adequate measures should be done to stop the bleeding.^[5] A good physician should ignore the bleeding so long as it is not causing an emergency, later the patient should be treated with the help of *Tikta Dravyas* for the stimulation of *Jatharagni*, *Raktasthambhana* and *Dosha, Pachana*.^[6]

Para-Surgical treatment

Those patients who did not get relief by medical treatment should be treated on lines of parasurgical methods. These are *Ksharakarma*, *Agnikarma* and *Raktamokshana*. In *Charaka Samhita*, it is mentioned that, most of disease can be managed with *Shodhana* (Bio purification method) *Samshamanam* (pacification, palliative treatment) *Nidana Parivarjanam*. *Acharya Charaka* has enumerated *Raktaja Roga* and their treatment by *Shonitavasechana*.^[7] And various techniques of *Raktamokshana* is also mentioned (Ch. Chi. 28).^[8] *Raktamokshana* is a technical term employed to denote a para-surgical procedure to expel out the vitiated blood from selected areas of the body, by specific methods. *Sushruta Samhita*, the oldest available manual on surgery has devoted an entire chapter for the description of *Jalaukas*, and a chapter on *Jalaukavacharaniya* for the purpose of blood letting. *Jalaukavacharana* is claimed to be the supreme therapy because of its safety and high efficacy in the disorders involving the vitiation of blood. It is safely indicated even for the king, rich, old, fearful,

weak, women and the people of tender nature. A brief description of *Jalauka* is provided.^[9]

Definition: *Shabdakalpadruma* has considered *Jalauka* in feminine gender and defined it as an aquatic creature employed to expel out the vitiated blood. *Bhagavadgomandal* defines *Jalauka* as an animal living either in water or in mud with distended abdomen.^[10]

Types of *Jalauka*

In *Ayurvedic* literature, *Jalauka* have been classified into two main groups:

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

General characters of *savisha jalauka*

- Thick
- Slow locomotion
- Fatigues
- Middle part elongated
- Delay in sucking
- Not commandable type
- Sucks little quantity of blood.

Features of *savisha jalauka bite*

If *Savisha Jalauka* is applied then a person suffers from following clinical symptoms: (Ref: Su. Su. 13/11)

1. Burning
2. Itching
3. Swelling
4. Drowsiness
5. Fever^[11]

Nirvisha jalauka

Nirvisha Jalauka originates in decomposed vegetable matter, as the purified stems of the several aquatic plants known as *Padma*, *Utpala*, *Nalina*, *Kumuda*, *Pundarika* and common zoophytes, which live in clear water.^[12]

Geographical distribution

Habitat

Such leeches swim about in sweet scented water, live on, nonpoisonous weeds, lie on the leaves of flowering water plants inspite of on the dark and oozy beds of pools and suck blood from the affected part of a human being without causing any discomfort.

General characters of *nirvisha jalauka*

Such types of *Jalaukas* are characterized by following points:

1. Strong and large bodied.
2. Ready suckers
3. Gree.^[13]

Collection and Preservation of leech

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 (*Jangha*) and keep the *Jangha* in the water for some time. Due to attraction of these diets, *Jalauka* will come and start biting. Then they are made to leave the skin of the person with the application of *Saindhava lavana* (rock salt) and collected.^[14]

Time of collection

Sharad Ritu (Autumn).

Preservation of leeches

After collecting the leeches like above, they should be kept in a wide and new pot. The pure water of tank with lotus is put into the pot. 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. Poisonous leeches must be thrown out.

Indications of leech application

Only *Vagbhata* has mentioned diseases where leech application is indicated, they are given here – *Gulma*, *Arsha*, *Vidradhi*, *Kushtha*, *Vatarakta*, *Galaroga*, *Netra Roga*, *Visha Dvashta* and *Visarpa*.^[15]

Purva-Karma

The following things must be considered in *Poorvakarma*.

1. Examination of the patient who is fit to undergo the *Jalaukavacharana*.
2. *Shodhana* of leech: Before the application of leech, it should be kept in the *Haridra* mixed water for one minute and then cleaned with the help of pure water.
3. Preparation of the patients: The part of the application should be cleaned and afterwards *Swedana Karma* is to be instituted. The affected part is to be rubbed (*Vigharshan*) by the rough powder of cow dung or clay.
4. It is contraindicated if the part is ulcerated.^[15]

Pradhana- Karma

Jalaukavacharana

The patient must be prepared as stated above. The leech will be too much unctuous and *Pichchila* and soft and as a result it slips off from the hand. Leeches attach to the skin by two muscular suckers before biting with three teeth inside their anterior suckers. Blood is sucked into the stomach by peristalsis. The middle portion of the leech will be swollen, as soon as it starts sucking the blood. It sucks only impure blood first. If the patient notices pain at the time of sucking the blood by the leech, it should be noted that the leech is sucking pure blood. It should be removed instantaneously by pouring *Saindhava Lavana* at its mouth.^[15]

Clinical findings of fresh sucking

A sensation of itching at the seat of application. A drawing pain at the seat of application.

This would give rise to the presumption that fresh blood is being sucked and the leeches should be forthwith

removed. The author *Vagbhata* has stated regarding the role of sucking of leech giving an ideal example that the swan only drinks the milk from the pot of milk mixed with water. The water is only left in the pot while the milk is received. It is its natural action. Similarly, the leeches have some power to suck the vitiated blood only, from the body.

Paschat karma

It consists of two things:

Management of leech

Care for leeches is to vomit the blood. Hence the following method should be applied.

Method of emission

After treatment of the Patient, usually, the blood will not clot due to the property of anticoagulant Hirudin". As soon as the leech is removed from the body an application with *Shatadhauta Ghrita* should be applied on the wound; or *Pichu* dipped in *Shatadhauta Ghrita* should be kept on it. In case of improper blood letting by a leech, the wound must be rubbed with honey, and cold water or else it should be bandaged or astringent sweet, greasy and cold paste should be applied over the wound.^[16]

Facts for leech applications

Today, systemic blood letting is restricted to a few limited conditions including Polycythemia and Haemochromatosis but this therapy is a special form of small blood letting. It is always proven its miraculous effect in the field of medicine time to time. In the failure of adequate venous return from a graft, reduces blood supply causing tissue necrosis placing a leech on the congested skin flat, fingers or other vascular compromised area removes the congested blood and enables the graft to be salvaged. Leeches are currently used during post-operative care of re-implanted fingers, skin graft and breast reconstructions. Leech therapy may be an effective therapy for rapid reduction of pain associated with Osteo-arthritis of the knee. Leeches are Anti-phlogistic, used for the local obstruction of the blood. They are used in Acute inflammation, Abscess, Boils, in bruises, Sprains and Blows. The leech saliva has helped in countless tricky re-attachment as well as being effective against various inflammatory conditions and skin diseases such as Eczema, Psoriasis. A medicinal leech can once bite, victims can bleed for hours, allowing oxygenated blood to enter the wound area until vein re-grows and regain circulation. The leech saliva has helped in degradation of fibrinogen, inhibition of factor XIIIa and lysis of fibrin clots. There are case reports of effective leech treatment for Haematomas, Purpuri Fulminans, Prionychia and even vascular congestion in the Penis.^[17]

The leech therapy indication

- Venous illness
- Acute phlebitis and Varicose veins

- Thrombophlebitis
- Varicose syndrome
- Post thrombotic syndrome
- Phlebo thrombosis
- Acute gout attacks
- Facial boil and infected insect bites.

Effects of the therapy with leeches

The loss of blood by sucking of the leech (approx. 10 ml) and the secondary Haemorrhage (approx. 20 – 40 ml) correspond to a very gentle and slow blood-letting with a reduction of the red blood haemoglobin according to the loss of proteins and a local endodermisation. This loss of blood is replaced by a break through lymph whereby it comes to a clear reduction of the viscosity and improvement of the flow characteristics of the blood (blood dilution) especially in the final path. This effect is strengthened by the emitted anticoagulants *Hirudin* of the leech. It comes to a local effect due to several active leech substances, which the leech emits, into the wound. *Hirudin* restrains the clotting of the blood, works diuretic and antibiotic. It keeps the wound open for the approx. 30 minutes sucking act and keeps the blood fluid. *Calin* also restrains the blood clotting *Haemetin* and *orgelase* which were proved within a related type of leeches (*Haementeria gheliani*) have a hyperaemic effect. The active leech substances totally block the enzymic processes activated and often exceeding within inflammation and trauma. The salivary glands of leeches also produce a cornucopia of other pharmacologically active substances, including an Antihistaminic, Proteases and possibly an Anaesthetic and an Antibiotic.^[18]

Limitations and Solutions in leech therapy

Leeches gave a miraculous effect in all field but some limitations or side effects are also there which are summarized below. *Hirudo medicinalis* has Endosymbiotic bacteria almost 20% of infectious complications seen after leech therapy. So appropriate Antibiotic prophylaxis should be administered to the patient who need leech therapy. Antibacterial agent can be determined by the resistance patent of the bacterial flora of regional *Hirudomedicinalis*.

The leech therapy may not be used in case of

- Haemorrhagic Diathesis (Hemophilia)
- Arterial look diseases (AVK) and the modifications in the capillaries
- In case of Diabetes (Diabetical Micro-Angiopathy).^[18]

CONCLUSION

The perfect 19th century solution for many surgical conditions is leeches says Ruth Sordle, in his special report on leeches in surgery published in the science and medicine section of *Houston Chronicle* quoting the miraculous events that attracted the *Houston plastic surgery* he is hopeful of getting solutions for many modern medical problems from them. The long history of the medical utilities of leeches has revealed its much

applauded therapeutic effects and even its risks. It is also said that leeches grow bacteria in their gut. In the April 1987 issue of *British Medical Journal*, researchers at Frenchay Hospital in Bristol, England noted that they had diagnosed six cases of infections caused by *Aeromonas hydrophilia*. Despite these findings, leeches will remain useful in plastic and reconstructive surgery to treat venous congestion according to latest reports from the west. In the words of Prof. Charles Lent, leading biologist of United States, leeches are useful in removing the blood from areas where tissue has been transplanted or reattached. Because when blood accumulates, tissue can die before it heals. Applying leeches to the area once or twice a day for a week gives capillaries time to grow across sutures and restore blood circulation. Thus words of *Acharya Sushruta*, are becoming a reality even after 2000 years of change of events that the physician having the art of leech application will be a successful one crossing the boundaries of time and space.

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