

ROLE OF JALAUKAVCHARAN IN ADHIMANTHA WITH SPECIAL REFERENCE TO GLAUCOMA

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<https://doi.org/10.46607/iamj2308092020>

(Published online: September 2020)

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Article Received:06/08/2020 - Peer Reviewed:14/09/2020 - Accepted for Publication:12/09/2020



ABSTRACT

Raktamokshana is the procedure of *Panchakarma*. *Jalaukavcharana* is the type of *Raktamokshana*. A detail description on *Jalaukavcharan* is available in *Ayurveda*. It is used in the management of various diseases in all the systems of the body including ears, nose, throat, eyes and head. Now a day Leeches are also used by ophthalmologists to treat inflammatory, traumatic processes and various diseases of eyes. There are various bioactive substances are present in saliva of leech. Along with that, it also exerts a therapeutic effect in several diseases. *Jalaukavcharana* is very effective ancient method of *Panchakarma* neglected by physician. There are many side effects of modern medicine. So, it is the need to spread awareness about *Jalaukavcharana* and its efficacy. Thus, *Jalaukavcharana* is the alternative therapy promising more effective and safer outcome for the society.

Keywords: *Jalaukavcharana*, *Raktamokshan*, *Adhimanth*, Glaucoma.

INTRODUCTION

Adhimanth has been contributed to negligence or improper management of *Abhishyanda* both from diagnostic as well as treatment point of view¹. Further the disease *Adhimantha* presents the features that are similar to those of glaucoma in modern science. The

present trend of treating glaucoma is hypotensive medical treatment, meiotic therapy, carbonic anhydrase inhibitors and osmotic agents². In most cases this treatment is followed by surgical treatment. In spite of all these treatment modalities, these have very

little effects while surgery is not out of danger. Considering these facts, the present study was undertaken to find out its solution for management of glaucoma. The word leech is derived from 'laece' which means physician. Leeches are given the name of *Jalauka* because of their site of dwelling and the source of their nutrition is *jala*³. It was used to treat a wide range of ophthalmic diseases, becoming a standard treatment for almost every ailment. It was practiced prophylactically as well as therapeutically. In *Ayurveda*, blood-letting therapies through leech are used in management of various disorders, especially which are caused due to vitiation of *Pitta* and *Rakta Dosh*.

Aim and Objectives:

1. To reveal the role of *Jalaukavcharana* in Glaucoma disease.
2. To do analytical study of *Jalaukavcharana* in *Netraroga* mentioned in *Ayurveda*.

Material and Methods: The data was collected from *Ayurveda* textbooks, *Vaidyas* and through personal experiences.

Types of Leeches: In *Shushrutasamhita*, 12 types of leeches are found and classify them into 2 main categories i.e. *Savishjalauka* (poisonous) and *Nirvishjalauka* (non-poisonous)⁴

<i>Savishjalauka</i>	<i>NirvishJalauka</i>
1 <i>Krushna</i>	1 <i>Kapila</i>
2 <i>Karbura</i>	2 <i>Pingala</i>
3 <i>Alagarda</i>	3 <i>Shankhamukhi</i>
4 <i>Indrayudha</i>	4 <i>Mushika</i>
5 <i>Samudrika</i>	5 <i>Pundarikamukhi</i>
6 <i>Gochandana</i>	6 <i>Savarika</i>

Contraindications of leech applications⁵: According to *Ayurveda*, leech application should not be performed in a patient suffering from *Sarwangashopha*, *Kshina*, *Shosha*, *Pandu*, *Udara* and also *Garbhini*.

Selection of *Jalauka*: Out of twelve, only six varieties of nonpoisonous leeches are used for medicinal purpose. *Shankhamukhi* type of leech is preferably used for medicinal purpose due to its rapid blood sucking capacity. As per classical description of *Ayurveda*, the leech neither too long nor too small should be preferred for therapeutic purpose⁶.

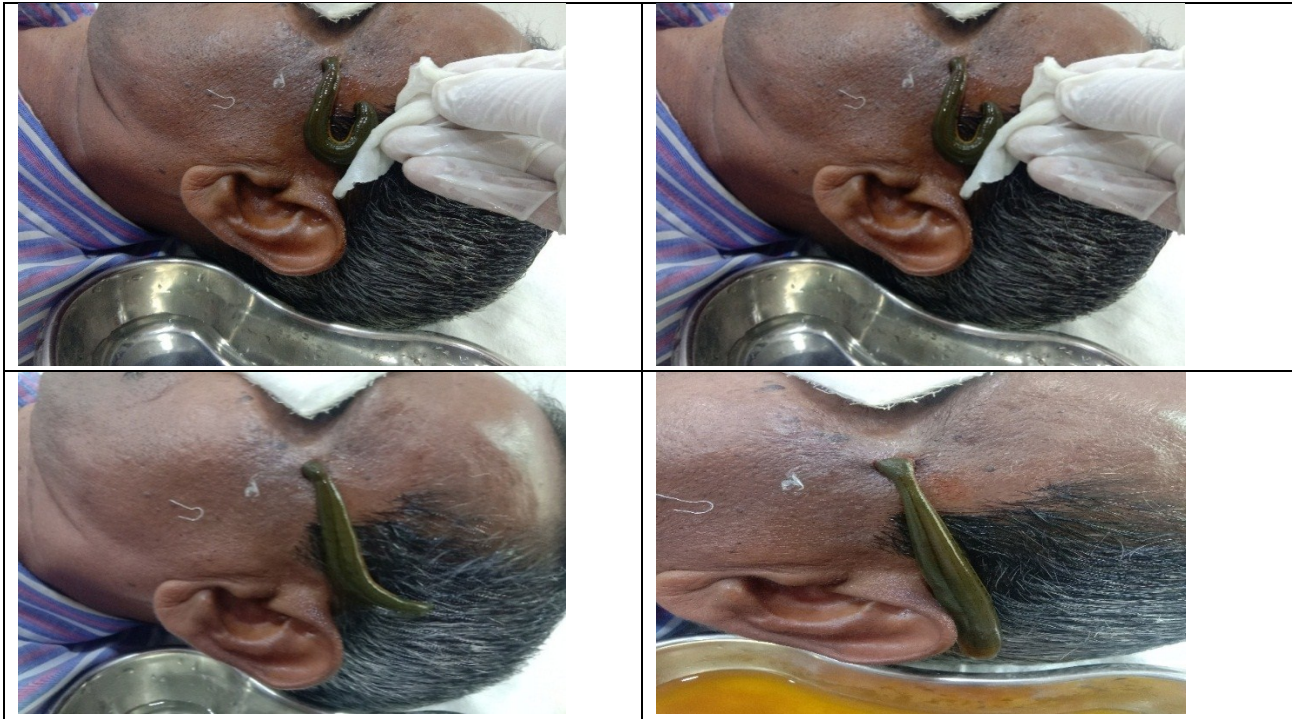
Storage and Maintenance: The leech will survive quite happily in a cool place provided the temperature. Does not exceed 15-20 leech should be stored in a well labeled container having multiple pores on the top for proper aeration. Avoid direct exposure to sunlight to the leeches. The water of container should be chlorinated and should be replaced after 5 to 6 days. About 50 leeches can be kept in one gallon (4 liter) of water, for best result, we should keep two leeches/ 250 ml of water. If it is not possible to get the chlorinated water, then keep the container of water in the open air for a period of time and then use it for storage of leech. It is better to avoid direct exposure of sunlight to the leeches.

Method of *Jalauka* application:

Purvakarma:

1. Proper *Snehan* (oleation) and *Swedana* (sudation) of the patient.
2. Purification of leech by pouring the leech in water mixed with turmeric powder.
3. Part preparation- Cleaning of part of the body to which leech is going to be applied.

Pradhankarma: 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 body part then application of *Madhu*, *Ghruta* or butter should be done.



Observation of leech during blood sucking:

While sucking the blood following signs appears in the body of leech.

1. Gradual distention in the central portion of the body of leech.
2. Itching and burning sensation at the site of bite.
3. Pulsations on the body of leech may be visible.

Removal of leech: After 30-70 minutes the leech is removed by itself, or by application of turmeric powder on the mouth of leech.

Paschatakarma:

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

Emesis of sucked blood- induction of emesis the leech that is applied to the lesion undergoes a process of *Vamana* so that the same leech can be applied next time to the same patient. For the *Vamana* of leech, turmeric powder is applied over the mouth of leech.

Precaution during leech application:

1. Bleeding and clotting time of the patient should be normal.
2. Gentle handling of leech.

3. Cover the leech with wet cotton.

Adverse effect of leech therapy: The leech therapy is very safe procedure, however some adverse effects reported by scientists these are local pain, itching, hypotension, vasovagal attack, hemorrhage, infection, allergic reactions, ulcerative necrosis and transmission of infectious diseases.⁷⁻¹¹

Frequency of leech application: The frequency of leech application will vary according to disease and severity. Generally, leech should be applied once a week up to six sittings. One leech should be reserved for a particular patient to avoid cross infection.

Netrarogsamprapti¹²: *Prakupit Tridoshas* vitiated by *Hetusevan* goes through *Urdwagami Sira* of *Netra* and produces *Daruna Netraroga*. *Netra* is the site of *Alochaka Pitta*. The properties of *Pitta* and *Rakta* are same as they have *Aashrayasrayibhav*. In such condition, *Jalaukavacharana* is very useful in *Netraroga* produced by *Rakttadushti* and *Pittadushti*. So, *Raktamokshana* is useful in following *Netrarogas*:

Abhishyanda (conjunctivitis), *Adhimantha* (glaucoma), *Siraharsha* (inflammation), *Sirotpata* (hyperemia), *Puyalasa* (dacryocystitis), *Vatparyay* (ocular pain), *Sashophaakshipaka* (purulent conjunctivitis), *Ashophaakshipaka* (conjunctivitis).

Glaucoma: Glaucoma is not a single disease. It has multi factorial etiology and characterized by progressive optic neuropathy resulting in a characteristic appearance of optic disc and a specific pattern of irreversible visual field defect that are associated frequently but not invariable with raised intraocular pressure¹³. Eye contains fluid called aqueous humor that continuously circulates in and out of eye. Aqueous humor is produced by ciliary process of ciliary body. Whenever there is block in drainage process intraocular pressure increases causing damage to optic nerve¹⁴. Leech therapy facilitates drainage of aqueous humor through the trabecular meshwork. As the leech suck peripheral blood, it creates negative pressure in the vein present locally and facilitates drainage. A number of setting may be required depending upon the improvement of patient.

Hirudin also help in reducing the blood thickness, thereby promoting optimum blood flow and preventing the risks associated with sluggish blood flow¹⁵. The patient who suffers from pain and inflammation will feel relief from the anti-inflammatory and anesthetic effects of the leech's saliva.

DISCUSSION

Adhimantha has drawn attention of ancient physician which is evident from the fact that its description, classification, symptomatology, complication and management are available in literature. Even though the disease *Adhimantha* has been considered as a curable disease if the treatment is given well in time otherwise the disease results in further deterioration and ultimately blindness ensues. *Jalaukavcharana* is one of the very effective treatment modalities for treating various *Netrarogas* as well as in many systemic diseases. When a leech is applied to biological active areas of human body, the bite itself gives a positive effect.

CONCLUSION

The scientific explanation of the disease along with its symptomatology has brought out the fact that the disease *Adhimantha* has similarity with glaucoma in its clinical presentation. It is one of the clinically defined

conditions of the eye where in at least more than two symptoms need to be looked for. The clinical presentation of disease is based on symptoms like blurring of vision, pain in the eye, headache, raised intraocular pressure, optic disc cupping and visual field changes. According to modern science, leech's saliva contains Hirudin Hyaluronidase enzyme which acts as anticoagulant, local anesthesia, anti-inflammatory, vasodilator, antithrombotic, hypotensive and analgesic effect. Hence, more efforts should be undertaken to optimize this utilization. More clinical trials are required to assess leech efficacy and safety in the treatment of eyes.

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Source of Support: Nil

Conflict of Interest: None Declared

How to cite this URL: Govind D Tundalwar et al: Role Of Jalaukavcharan In Adhimantha With Special Reference To Glaucoma . *International Ayurvedic Medical Journal* {online} 2020 {cited September, 2020}; Available from: http://www.iamj.in/posts/images/upload/4447_4451.pdf