

**“A Case Study: Effect of *Jalaukavcharan* in *Adhimantha*
W.S.R. to Chronic Simple Glaucoma.”**

Govind D Tundalwar*¹, Komal K Sharma², Jayshree J Malwe³

1. Associate Professor of *shalakyatantra*,
2. PG Scholer of *shalakyatantra*,
3. PG Scholer of *shalakyatantra*,

Dept. Shri Ayurved Mahavidyalaya, Nagpur, Maharashtra, India.

*Corresponding Author: drgovind2005@gmail.com

Abstract:

In *Ayurveda 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's 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*, Chronic Simple 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*, bloodletting therapies through leech are used in management of various disorders, especially which are caused due to vitiation of *Pitta* and *Raktadosha*.

Objective:

To observe the effect of *Jalaukavcharan* in simple chronic glaucoma patient.

Material and Methods:

A 62 year male patient presenting with severe pain in left eye, Headache came to OPD of our institute. So the patient treated by *Jalaukavcharan* therapy and medications.

Result:

Remarkable result observed in the form of improvement in all chief complaints.

Symptoms of Glaucoma can be correlated with *Adhimantha*⁴

- *Nayne Tivra Vedana*- severe pain in eye
- *Siraso-Ardham-Vyatham*- headache in one side
- *Drushtinasha*- loss of vision

- *Adhmana*- raised tension, feeling of an increased fluid inside.

Glaucoma:

It 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 pressure⁵. Eye contains fluid called aqueous humor that continuously circulates in and out of eye. Aqueous humor is produced by *cilliary* process of *cilliary* body. Whenever there is block in drainage process intraocular pressure increases causing damage to optic nerve⁶. 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 flow⁷. The patient who suffers from pain and inflammation will feel relief from the anti-inflammatory and anesthetic effects of the leech's saliva.

Case Report:

- Name of patient: xyz
- Age/sex: 62 yrs/male
- OPD No: 1369

- Place: Nagpur
- Occupation: Business of paper printing
- Date of Consultation:

Chief complaints:

- Severe pain in left eye } since 7-8 months
- Headache } since 7-8 months
- Loss of vision in left eye } since 2 yrs
- Redness, watery secretion in left eye } since 7-8 months
- Insomnia } since 2 yrs

Present and past History:

- LE cataract operation done before 1/1/2 yrs
- H/O HTN on regular medications since 1 yrs
- Use of specs since 20 yrs
- Occupational History: Daily night duty in paper printing since 25yrs, lack of sleep.

Local Examination:

- RE - Slight conjunctival congestion
 - Vision- 6/6 with old spect
- LE - Conjunctival congestion
 - Cornea- cloudy and edematous
 - Anterior chamber- Shallow
 - Pupils- Semi dilated, NRTL, Pseudophakia
 - Tension- digitally hard eye globe
 - Vision- No PL
- Tonometry examination
 - RE IOP- 10 gm -17 mm of hg
 - LE IOP-
 - 5gm – 0

- 7.5gm- 17mm of hg
- 10gm- 49.5 mm of hg

Treatment:

If IOP is more – IV mannitol 20% in 100 ml stat

- Tab. Dimox 250 mg 1 TDS
- Oxket MF eld 1 drop TDS

Alternate treatment:

- Travisight eld 1 drop TDS
- Cap. *Punarnava* 2 BD
- *Chandraprabha vati* 1 OD
- *Jalaukavcharan*- 1st time- 4 settings/month
2nd time- 4 settings/month

Diet Recommendation:

Patients were advice to follow *Pathya Ahar* and *Vihar* as mentioned in *Netraroga Chikitsa* in classics.

Purva karma:

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.

Pradhan karma:

Before application, prick the skin at *Apanga Sandhi* (Outer canthus) region 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.

Paschata karma:

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.⁸⁻¹²

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.

Result:

Symptoms:

Sr.no	Symptoms	Before treatment	After treatment
1.	Severe pain in left eye	Present	Absent
2.	Headache	Present	Absent
3.	Loss of vision in left eye	No PL	No PL
4.	Redness, watery secretion in left eye	Present	Absent
5.	Insomnia	Present	Absent

Test:

Sr. no	Schizot'z Tonometry of LE	Before treatment	After treatment
1.	IOP	49 mmHg	21 mmHg- after first setting No rise in IOP

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 wherein 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, leeches 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.
- This study concluded that the above treatment is effective and given symptomatic relief to the patient and improvement in IOP.

Reference:

1. Sushrutasamhita, Ambika DattaShastri, 12th edition, 2001, Chaukhambha Orientalia, GopalMandir Lane, Varanasi.
2. AshtangHaridaya, Prof. K.R. Srikantha Murthy, Reprint 2002, Krishnadas Academy, Varanasi.
3. SushrutaSamhita, AmbikaDattaShastri; Part 1, Sutrasthanana, JalaukavcharaniyaAdhyaya 13/9, Edition Reprint 2005, ChaukhambhaPrakashan, Varanasi.
4. Prof. Uday Shankar, Text Book of Shalakyatantra, volume 1, First Edition 2012, Chaukhamba Vishwabharti Delhi.
5. Comprehensive Ophthalmology by A.K Khurana, New age international publication, 4th edition 2007 chap-9, pp-210,211
6. Clinical Ophthalmology by Jack J Kanski, 5th international edition, Butterworth Heinemann publication New York 2003, chap no-8, pp-170.
7. Review of leech application in Ayurveda and Shrilankan traditional medicine, by E.R.H.S.S. Ediriveera, article published in JAHM, Volume ||, Issue |, pp 62-76
8. Mateos Micas M, GarciaDiez E, Forteza Gonzalez G. Sanguijuelasmedicinalis: utilidad en microcirugia. Proposito de un caso. Rev Esp Cir Oral Maxilofac. 2001;23:90-94
9. Yantis MA, O'Toole KN, Ring P. Leech therapy. Am J Nurs 2009;109:36-42;quiz 43
10. Kalbermatten DF, Rieger UM, Uike K, et al. Infection with *Aeromonashydrophila* after use of leeches in a free microvascularosteo-(myo)-cutaneous flap- suggestions for successful management. HandchirMikrochirPlastChir. 2007; 39:108-111

11. Altamura D, Calonje E, Liao JI, Rogers M, Verdolini R, Diffuse cutaneous pseudolymphoma due to therapy with medicinal leeches JAMA Dermatol. 2014;150: 783-4

12. Khelifa E, Kaya G, Laffitte E, Cutaneous pseudolymphomas after leech therapy J. Dermatol. 2013; 40: 674-5.

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