

Case Report

Ayurveda Management of Herpes Zoster Ophthalmicus (HZO) - A Case Report

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ABSTRACT:

Background: Herpes zoster (HZ) is caused by reactivation of the Varicella Zoster Virus (VZV). When the ophthalmic division of the trigeminal nerve is involved, the condition is termed Herpes Zoster Ophthalmicus (HZO). HZO is an ophthalmic emergency that may result in serious ocular complications, including vision loss, if not treated promptly. **Clinical Findings:** A 31-year-old male with recently diagnosed Herpes Zoster Ophthalmicus and diabetes mellitus presented to the outpatient department with painful vesicular eruptions, swelling, redness, and burning sensation over the right forehead and periocular region. Based on Ayurvedic clinical assessment, the condition was diagnosed as *Visarpa*. **Intervention:** The patient was managed with *Jalaukavacharana* (leech therapy), *Pittaghna* local applications, and individualized internal Ayurvedic medications while continuing the prescribed anti-diabetic treatment. **Outcome:** The patient showed marked clinical improvement with complete resolution of swelling, redness, and burning sensation, along with satisfactory healing of the skin lesions. No ocular complications or post-herpetic neuralgia were observed during the follow-up period. **Conclusion:** This case suggests that an integrative Ayurvedic management approach may be beneficial as an adjunctive treatment for Herpes Zoster Ophthalmicus. Early intervention was associated with favorable clinical recovery and the absence of major complications in this patient. However, larger controlled studies are required to establish the safety and effectiveness of this approach.

KEYWORDS: Case report, Herpes Zoster Ophthalmicus (HZO), Leech therapy, Pain management, *Visarpa*.

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1. INTRODUCTION

Herpes zoster (HZ), a viral infectious disease is caused by Varicella Zoster Virus (VZV). It is a sporadic disease commonly known as Shingles. A systematic review of studies from 2002 to 2018 suggests with female gender predominance the cumulative incidence per 1000 population is estimated between 2.9 to 19.5 cases. [1] Herpes Zoster is characterised by a very painful, segmental eruption of grouped papules and vesicles on an erythematous, slightly oedematous base with unidermatomal or multidermatomal distribution while thoracic intercostal nerves and ophthalmic division of trigeminal nerve are among most commonly affected in HZ. [2] Old age, female gender, white race, cell mediated immunity dysfunction i.e. immunosuppressed individuals, diabetes, genetic susceptibility, mechanical trauma, recent psychological stress are the risk factors for HZ. [3]

With the involvement of Trigeminal nerve and its branches, lesions of HZ may appear on the face, in the eyes, in the mouth or on the tongue. But when the ophthalmic branch is involved, symptoms appear in the eyes to be termed as Herpes Zoster Ophthalmicus (HZO) which is considered as an ophthalmic emergency with a risk of vision loss. [4] Ocular complaints like conjunctivitis, uveitis, episcleritis, keratitis or retinitis were observed in 50-80% of HZO cases. [5] Modern medicine treats Herpes zoster with antiviral drugs, analgesic, inflammatory drugs and local applications of various skin soothing agents or local anaesthetic jelly. Through various clinical study, safety of antiviral drugs like acyclovir is established but is having some adverse drug effects like headache, nausea, vomiting, diarrhoea, confusion, hallucinations, tremors, lethargy, disorientation, convulsions, coma. [6]

Herpes Zoster can be correlated with *visarpa* (spreading skin lesion). It is an *ashukarivvyadhi* (acute disease) which spreads very quickly like snake, gaining its name *Visarpa* or *Parisarpa*; *Sphota* (skin eruptions or blisters) and *Shopha* (inflammation) along with associated symptoms which are in acute and rapid spreading in nature are the main

symptoms of *visarpa*. [7] It is a *pitta dosha* predominance *tridoshaja* i.e. *Vata*, *Pitta* and *Kapha* disease with *Rakta* (blood), *Lasika* (plasma), *Twacha* (skin) and *Mansa* (muscles) as *dushya*. [8] Considering *Pitta dosha* and *rakta dushya* predominance, *Raktamokshana* (bloodletting) is suggested as the prime line of treatment. [9] Considering above conditions *Jalaukavacharana* i.e. leech (*Hirudo medicinalis*) application is preferred among the types of *raktamokshana*. Ayurveda treatment comprising leech therapy, Internal medicine and local application yielded favourable response. This case shows successful effectiveness of Ayurveda management in clinical emergency like HZO saving the patient from potential blindness showing its innovative yet economical treatment strategy.

2. CASE REPORT-

A 31 year old male patient, presented in OPD (OPD2023-15547) of *Panchakarma* department of *Pakwasa Samanvay Rugnalaya, Nagpur* with oedema and blisters on right sided forehead, right eye lids oedema (unable to open right eye by own), oedema over right side of face with severe burning pain over right sided forehead and eye since 1 day with no personal and family history of such symptoms, diabetes or any psychological symptoms in the past. A day earlier he was treated by private allopath physician, diagnosed him as HZO and treated with orally an antiviral (Valacyclovir), a steroid (Deflazocort), a NSAID (Paracetamol), an antacid (Pantoprazole), an antiviral lotion for local application and through routine investigation found very high fasting (310 mg/dl) and post meal (592 mg/dl) blood sugar levels, so Diabetologist suggested oral and injectable anti-diabetic medicines (30% Human Insuline + 70% Insuline Isophane), an antibiotic (Cefpodoxime + Clavunic Acid) and an anticonvulsant drug (Pregabalin) for neurogenic pain orally. Ophthalmologist treated the patient with an antiviral (Acyclovir), an antibiotic (Polymixime + Chloramphenicol) and lubricant (Carboxymethyl Cellulose) eye drops. After receiving one day doses of these medicines, with no relief and severe pain visited our OPD.

Table 1. Timeline of events

Date	Event
31/3/2023	Manifestation of Symptoms and patient consulted for allopathic treatment by Physician, Ophthalmologist, Diabetologist
01/04/2023	First clinical consultation, diagnosis and initiation of Ayurveda treatment with internal medications, local application and 1 st leech application along with continuation of only anti-diabetic allopath medications.
03/04/2023	2 nd leech application with continuation of other medications
05/04/2023	3 rd leech application with continuation of other medications
10/04/2023	4 th leech application with continuation of other medications
26/04/2023	5 th leech application with continuation of other medications and addition of <i>Dashanga lepa</i> as local application
30/04/2023	Advised to continue all previous medicines for 1 more month.
31/05/2023	Stopped All medications for HZO.
15/08/2023	Long term follow up showed complete recovery with no recurrence of any symptoms even after cessation of treatment for more than two months.

Clinical findings

General Examinations: Patient was afebrile with pulse 80 /min, blood pressure 130/80 mm of Hg, 82 kg weight, 182 cm of height, swelling and blisters over right sided forehead and cheeks, swelling over right eye lids with no such symptoms on left side of the face. Swelling of right eye lids was preventing eyelids to open ([figure 1: Image A](#)). VAS (Visual Analogue Scale) and PRS (Pain Rating Scale) was very high i.e. 9 and 5 respectively which eventually get reduced after treatment.

Table 2. Investigations

Sr. No.	Investigations	Patient Value	Normal Value	Date
1	Fasting blood Sugar	310 mg/dl	70/110 mg/dl	31/03/23
2	Post prandial blood sugar	596 mg/dl	70-140 mg/dl	31/03/23
3	Fasting blood Sugar	187 mg/dl	70/110 mg/dl	08/04/23
4	Post prandial blood sugar	330 mg/dl	70-140 mg/dl	08/04/23
5	HbA1C	13.5%	5.7-6.5	08/04/23
6	Random Blood sugar	255 mg/dl	100-140 mg/dl	14/04/23

Diagnostic Assessments: Modern counterpart already diagnosed the patient and started the treatment accordingly but with no relief in symptoms even after taking Analgesic medicines with the risk of losing eyesight and rapidly aggravating symptoms, so patient came in our OPD for Ayurveda treatment.

Diagnostic challenges: The challenge was to diagnose the patient by Ayurveda perspective but as the disease was of

Systemic Examination: Patient was conscious, well oriented to time, place and person but was restless due to severe burning pain over right forehead, cheek and eye. As patient was unable to open right eye due to swelling, various ophthalmic examinations regarding cornea, conjunctiva and vision with Snellen chart were not performed. Superficial and deep tendon reflexes were also normal. Bowel habits were normal.

Investigation: Patient was investigated by physician and diabetologist. Investigations Details are shown in [table 2](#).

aggressive nature with possible severe complications, early and accurate diagnosis is often difficult because many diseases share similar clinical symptoms which leads to misdiagnosis or delayed treatment resulting in affecting the patient outcomes. After assessing the symptoms by Ayurveda perspective, initially differential diagnosis like *Visarpa*, *Kitadansha* (Insect bite), *Agantuja Shotha* (Oedema due external cause) were considered. As there

were no history of insect bite or application of any irritant material or external trauma on affected site but having very fast spreading oedema along with blisters and severe pain diagnosis of *Visarpa* was confirmed and treated accordingly.

Prognosis: Earlier prognosis of the patient was poor as the disease carries a poor prognosis due to the rapid progression with chances of severe complications but after first leech sitting and with internal medications patient got marked relief to continue Ayurveda treatment.

Therapeutic Intervention: Treatment was formulated considering *visarpa vyadhi* with various disease factors like *Pittadosha*, *Raktadhatu*, *twacha sthana*, *netraindriya adhishtana* in *vasanta ritu*. *Shodhana* with the removal of *dushtarakta* and *Shamana* with internal medicine along with local application was planned. For *pitta dosha* and *raktadushti* removal, *Jalaukawacharana* was scheduled. Considering *pittaja vyadhi* with severe burning, orally *Mauktik Kamdudha Rasa*, considering *vrana awastha* (condition of wound by blister) capsule Grab; in *raktadushti* conditions, to lower the burning sensation and in measles like conditions occurs in *vasanta ritu*, *Paripathadi Kadha*, well-known drug in *Panchabhautika* wing of Ayurveda, [10] were advised. Local application of *Shatadhauta ghrita* for burning pain over affected area was advised. Later

Dashanga lepa with Rose water for local application along with *shatadhauta ghrita* was suggested (table 3). Allopath treatment of diabetes was continued and no Ayurveda medicine was prescribed for the same. Special attention was given to corneal protection due to the known risk of keratitis and neurotropic changes. The patient was kept under close ophthalmic observation, with regular assessment for signs of corneal involvement and was monitored for warning symptoms such as increased redness, photophobia, or diminution of vision, and was advised immediate ophthalmological consultation if these occurred. Strict advice was given to avoid eye rubbing, along with the use of protective eyewear to minimize exposure to dust and environmental irritants. Thus, along with the primary Ayurveda management, appropriate supportive measures and vigilant monitoring were undertaken to prevent corneal complications.

Total five leech application settings were completed. Total 06 medium to large size leeches obtained from local vendor were used every time. Number of leeches applied were different in every sitting was depends on number of leeches attached to affected area. Total 06, 04, 03, 05 and 03 leeches were applied on affected area in first, second, third, fourth and fifth setting respectively (table 3).

Table 3. Treatment details -01/04/2023 to 31/05/2023

Date	Treatment	Aushadh Sewan Kala With Anupana
01/04/2023	Consultation and initiation of Ayurveda treatment	
	A. Leech application	6 leeches
	B. <i>Pradeha</i> (Local application)- <i>Shatadhauta Ghrita</i>	Local application as required.
	C. Internal medicine	
	<i>Mauktik Kamadudha</i>	1 tab (125 mg) TDS with water
	Capsule Grab (Green Remedies Batch no.-GRB058, MFG-12/2022, EXP-11/2025)-	2 capsule (125 mg each) TDS with water
	<i>Paripathadi Kadha</i>	20 ml TDS with ½ cup water
03/04/2023	Leech application	04 leeches
	Continued all previous medicines.	
05/04/2023	Leech application	03 leeches
	Continued all previous medicines.	
10/04/2023	Leech application	05 leeches
	Continued all previous medicines.	

26/04/2023	Leech application	03 leeches
	Continued all previous medicines.	
	<i>Dashang Lepa</i> (Classical preparation)	Local application with Rose water alternately, along with the application of <i>Shatadhauta ghrita</i> .
30/04/2023	Continued all previous medicines for 1 month.	
31/05/2023	Stopped all the medications for HZO.	

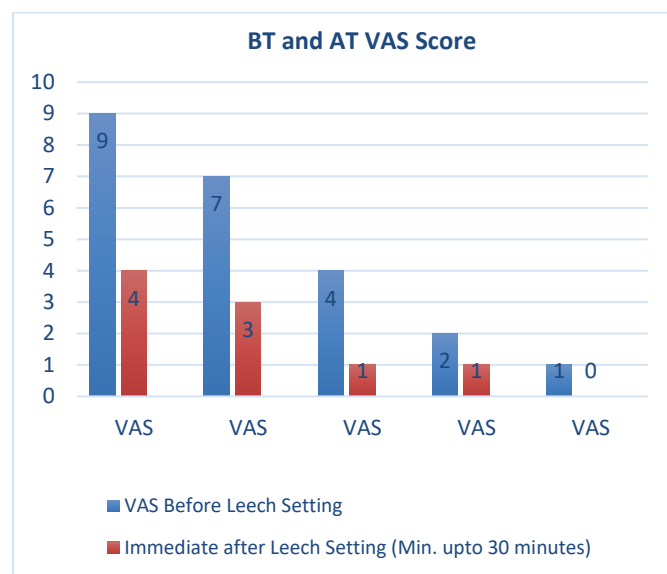
3. FOLLOW UP AND OUTCOMES

Leech application was started on 1st day of consultation i.e. on second day of onset of all the symptoms. The idea was to apply as many leeches as possible to extract maximum amount of *dushta rakta*, so total 6 leeches were applied (as only 6 leeches attached) on right side of forehead gave immediate 70% relief. Oedema, reddishness and pain on infected site with feeling of lightness were observed by patient. VAS and PRS come to 4 and 2 from 9 and 5 respectively. Graphical presentation of VAS and PRS before and immediately after leech therapy was given in Bar [Diagram 1 and 2](#) respectively.

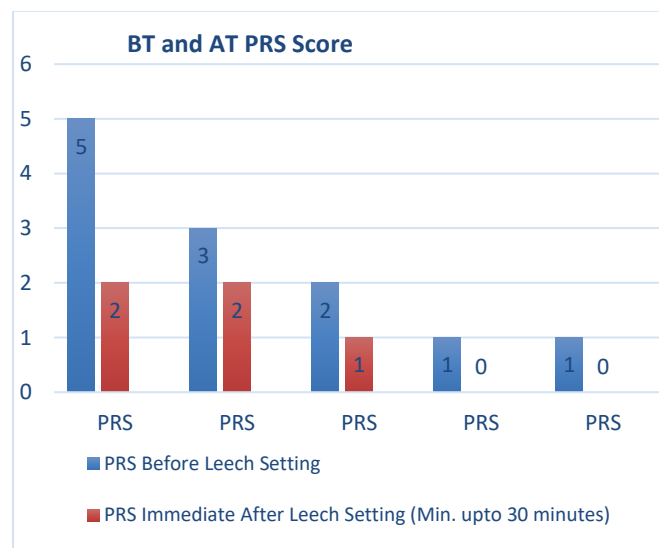
In subsequent follow ups, symptoms were gradually relieved. On fifth follow up (26/04/2023) total relief was up to 90% with oedema over affected area, burning pain, eye lids oedema, and reddish discolouration of right eye were completely relieved ([figure 1: Image D](#)). Occasional minimal pain in affected eye especially at night, occasionally minimal itching over forehead, and slight heaviness over right upper eye lid with no oedema was experienced by patient. So along with previous medicines, *dashanga lepa* with rose water for local application over affected forehead area was prescribed. Following images show changes in consequent follow ups of this patient.

On follow up date 30/04/2023, patient had complete relief in all other symptoms but occasionally very minimal itching, mild hypo-aesthesia feeling over right eyebrow and slight blackish discolouration on the site of blisters were present. So patient was advised to continue diabetes medication and all the Ayurveda medications except leech application for one month. On follow up date 31/05/2023, all medications for HZO were stopped. On last visit (15/08/2023) and till the

submission of current manuscript patient experienced complete recovery with no residual or recurrence of symptoms.



Bar Diagram-1 Showing VAS Score before & after Leech therapy on every follow-up.



Bar Diagram no. 2 Showing PRS Score before & after Leech therapy on every follow-up.



Figure 1- showing patient follow up images.

Adherence- The patient willingly reported good adherence to the prescribed oral treatment plan with regular follow-ups.

Tolerability- Patient very well tolerated Ayurveda internal medicines, local applications and leech therapy.

Adverse effects- The treatment went well without having any adverse effects specifically dermatologic reactions, gastrointestinal intolerance, headaches, or systemic complaints requiring dose modification.

4. DISCUSSION

Shingles or herpes zoster has a tendency of rapid spread and severe burning at infected area. Leeches provide hemophagy (feed on blood) effect which helps to decrease the viral load of herpes zoster. [11] During feeding, leeches exerts analgesic effect at feeding site to avoid detection by the host thus providing analgesic effect. Thus leech application in this case leads to the reduction of viral load, anti-inflammatory action, thereby reducing pain, swelling and other associated symptoms. The same observations were put forth in a case report where promising results were achieved with the help of leech application. [12, 13]

The sign and symptoms of *visarpa* can be linked with Herpes Zoster. Considering *pitta dosha* predominance in *visarpa*, principal line of treatment is *Raktamokshana* (removal of blood). Leech therapy as a part of *raktamokshana*, *Mauktik Kamdudha* and *Paripathadi kadha* as *Pitta doshaghna* internal medicines and *Shatadhauta ghrita* as *pradeha* (local application) were preferred. Similarly Capsule Grab, a proprietary medicine, was prescribed to relieve *vrana* (wound) condition. On fifth follow up (26/04/2023) with previous medicines, *dashang lepa* with rose water was added as *pradeha* having *pittaghna* and *vishghna* properties. Concisely *shodhana* with leech application as local *strotoshodhana* and *shamana* by internal blood purifying, *vishaghna* medicines along with *vishaghna* and *pittagna* local applications was the main theme in treating this patient.

Patient himself avoid taking allopath medicine suggested for herpes, but was counselled for not to avoid anti-diabetic medicines as uncontrolled DM may worsen the condition. Post Herpetic Neuralgia (PHN) is very common in spite of antiviral treatment in herpes patients which was not experienced by this patient. Yet there is no definite protocol for PHN, prolong use of drugs like Pregabalin is suggested but those are costly whereas Leeches are economical. In this case, a diabetic patient suffered from HZO continued anti-diabetic treatment, discontinued other allopath treatment but started and continued Ayurveda treatment for the same to achieved desired result. This case study may be used as clue to work in this direction which can give more practical solutions to a clinician while treating the patient simultaneously with combine efforts of different streams of treatment modalities for economical and minimal or no adverse effects.

Limitation:

- **Viral Load vs. Symptom Management:** Leech therapy manages the *manifestations* (inflammation, stasis, pain) but does not have a direct antiviral effect on the Varicella-Zoster Virus itself. It must be paired with potent *Vishaghna* (anti-toxic) internal herbs.

- As this is a single case scenario, these findings require validation by well-designed randomized controlled trials to establish the efficacy and safety of Ayurveda management in HZO.

5. CONCLUSION

A recently diagnosed 31 years male patient of HZO and Diabetes with the history of initiation of symptoms of the same and allopath treatment since 1 day having no relief came in our institutional OPD. HZO co-related as *Visarpa* and treated accordingly with *Raktamokshana* with 5 sittings of leeches, *Pittaghna* internal medicines and local applications gave promising results along with the continuation of anti-diabetic allopath medication. HZO treatment by Ayurveda with leech therapy and internal medicine is a novel, easy and very much economical approach. This kind of pragmatic trial in the management of such diseases with associated illness should be our priority to explore further clinical applicability. It also paves the road for future research on the effect of Ayurveda treatment on such infectious diseases with neurogenic involvement.

Declaration of Patient Consent: The authors confirm that they have acquired a patient consent form, in which the patient or caregiver has granted permission for the publication of the case, including accompanying images and other clinical details, in the journal. The patient or caregiver acknowledges that their name and initials will not be disclosed, and sincere attempts will be undertaken to safeguard their identity. However, complete anonymity cannot be assured.

Patient's Perspective: At the start of disease, patient was very much troubled with pain, burning, swelling, some severe bad effects and in fear of losing right eye sight. He was not pleased, and was saddened for not getting slight relief with 1 day of allopath treatment. After first sitting of leech therapy with major relief he was relaxed and was assured about Ayurveda treatment.

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