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CASE REPORT

Management of herpes zoster with *agada yogas* - a case report

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Abstract

The Varicella-zoster virus (VZV) or human herpes virus 3 is a human alpha herpes virus belonging to the herpes viridae family. It causes varicella infection (chicken pox) and reactivation of the dormant virus leads to herpes zoster (HZ). The Disease manifests in three stages—pre-eruptive, acute exudative, and chronic. Clinical presentation of herpes zoster being vesiculo pustular eruptions associated with intense pain and burning sensation can be correlated to *Visarpa, Visphota and kaksha*. Signs and symptoms of herpes are similar to the *lakshanas* manifested *in loothavisha*. A case of a 38-year-old female patient diagnosed with herpes zoster managed with treatment principles and medicines explained in *Loothavisha* is presented here. Special *Agada yogas* like *Kottamramachadi agada* and *Lodhrasevyadi agada* are employed along with *Patoladi kwatham* and *Vilwadi gulika* in the treatment. Complete recovery from the symptoms with no signs of relapse after 1 month of follow-up was attained.

Introduction

Herpes zoster[1] (Shingles, HZ) is a disorder caused by the reactivation of the varicella-zoster virus which belongs to a group of herpes viruses. Shingles another name for Herpes Herpes viruses are DNA viruses which produce specific intra-nuclear inclusions. After an episode of herpes infection, the virus may persist in its latent form and may get reactivated producing another infective condition.

The Varicella-zoster virus (VZV) or human herpes virus 3 is a human alpha Herpes virus belonging to the herpes viridae family with a double-stranded linear DNA genome and icosa hedral capsid. It is neurotropic; causes varicella infection (chicken pox). After recovery from primary infection, the virus remains dormant in the sensory root ganglion. On activation due to unknown stimuli, the virus travels from the sensory ganglion to the skin. Reactivation of the dormant virus leads to Herpes zoster (HZ). It can take place suddenly or may be triggered by stress, fever, radiation therapy, tissue damage or immune suppression. The incidence[2] varies with age highest in elderly (> 65 years), varying from 3.9–11.8 per 1000 persons per year.

Prevalence Herpes zoster lesions produce virus-specific T-cell proliferation and produce specific antibodies (IgG, IgM etc). Resolution is characterized by the production of interferon-alpha. VZV infection leads to

systemic inflammation that may persist for weeks. Recent studies show that reactivation of the virus leads to the release of exosomes (extracellular vesicles) that contain inflammatory and coagulative proteins (proteins that aid in coagulation and inflammation and favour cellular communication.)

The sites commonly involved are the thoracic region followed by lumbar cervical, trigeminal including ophthalmic and lumbosacral dermatomes are the common sites. The lumbar and cervical roots are frequently involved but ophthalmic zoster is seen more in old age. People with diabetes are more prone to acquire this disease, due to the already weakened immune system and damaged nerves.

Transmission

Transmission can occur to individuals who have not had chickenpox or received vaccination via inhalation of infected droplets or direct skin contact with persons in the eruptive stage of Herpes Zoster. Other herpes infections eg. Herpes simplex, CMV may also occur in patients with herpes zoster

Clinical Features

The Disease manifests in three stages—pre-eruptive, acute exudative, and chronic. The pre-eruptive stage, in the majority of patients, presents with burning or intense pain, tingling tenderness and hyperesthesia, at least 2 days before cutaneous eruptions. Constitutional symptoms such as headache, general malaise, and photophobia may also be present. In the acute eruptive phase which lasts for about 2-4 weeks, multiple umbilicated and painful vesicles develop within the affected dermatome. These vesicles may become pustular and develop in a continuous or interrupted band in the area of usually one, seldom two or more dermatomes. Mucous membranes within the affected dermatomes may also get involved and associated with adjacent lymphadenitis. New vesicles continue to appear for several days. The vesicles often burst, ulcerate, and eventually crust out. This is the most contagious phase. Pain is often severe and not relieved with analgesics. Pain may persist for a long period, especially in weak and immune-compromised patients.

Chronic HZ infection is characterized by severe pain that lasts >4 weeks. Patients experience dysesthesias, paresthesias, and sometimes shock-like sensations. The pain is disabling and may last for several months. In elderly and immunocompromised patients, the local eruptions tend to become necrotic. years later, the virus “wakes up” and travels along nerve fibres to the skin.

Complications

Post–herpetic neuralgia is the most common complication and most difficult to treat. Secondary infection, eczematization, scarring and keloid formation may also occur as a sequel. Visceral involvement, facial especially ocular palsy and encephalomyelitis are common complications. Motor involvement is reported to have occurred in 5% of cases. Immunocompromised patients may develop disseminated zoster. Systemic involvement may turn out to be fatal.

Diagnosis

In most patients, diagnosis is made clinically, usually, no investigations are required. Tzanck's smear, immunofluorescent staining of the smear with monoclonal antibodies may be needed in some cases. Detection of VZV-specific IgM antibodies in the blood(infective stage). DFA testing (Direct fluorescent Antibody testing) and PCR testing of vesicular fluid or corneal lesion.

Treatment

Topical wet compresses and analgesics, prophylactic antibiotics, antiviral therapy like acyclovir, and topical and oral steroids are administered depending on the presentation

Patient information

Clinical findings

Timeline

Diagnostic assessment

Therapeutic intervention

Follow-up and outcomes

Ayurvedic Approach

Skin diseases in Ayurveda Samhita are narrated chiefly under the heading of *kushta*, *virsarpa, visphota* and *kshudrarogas*[3]. The various forms and innumerable types of the presentation can be identified and named according to *dosha, dooshya, adishtana, roopa* and so on.

Descriptions of *Vataja* and *Pittaja Visarpas, Visphota* and *Kaksha (kshudra roga*) have been used to denote the varied presentations, sites and stages of Herpes. Clinical presentation of herpes zoster being vesiculo pustular eruptions associated with intense pain and burning sensation confined to an area supplied by a sensory nerve ganglion, the condition may be linked to *Visphota* described in *Madhava Nidana*[4]. *Visphota* has been described as a Disease which burns as Vesicular eruptions (*Agnidagdha sphot*a) appear all over the body or on any particular area, associated with fever and malaise. *Kaksha* described *in Charaka samhitha*,[5] which illustrates the manifestation of *Vatapitta* predominant blisters distributed along the trunk in the manner of sacred thread, has been related to herpes zoster. *Visarpa* is depicted as a rapidly spreading acute disease involving skin and multiple systems. In the pathogenesis of *visarpa*, seven *dhatus* and *tridoshas* are involved. *Agni mandya* leads to *dhatwagni dushti* which

causes vitiation of *tridoshas and raktha* and gets lodged in between *twak* and *mamsa*. When these *doshas*, travelling through *raktha* and *lasika*, spreads outwards, they cause *bahya visarpa* and inwards to cause *abhyantaravisarpa*. Owing to the spreading nature of eruptions herpes zoster is generally correlated to *visarpa* with a predominance of Vata and Pitta, *Vata* predominance is reflected in the pain manifestations and involvement of nerves and *Pitha* predominance from acute eruptive lesion. The treatment Principles of *Visphota* and *Kaksha* are the same as that of *Visarpa.*

Apart from these, in Kerala, Herpes Zoster is effectively treated along the line of management of *Lootavisha.* *Lootavisha* is described as a manifestation caused by a spider bite or contact with its body parts It is also described as the formation of toxic blisters as a result of ingestion of vitiated food[6]. Its clinical features are characterized by raised, round, exudative vesicular eruptions spreading to sites wherever contact with discharge occurs. The lesions are associated with severe pain, burning sensation and fever. They undergo rapid suppuration, the colour varying accordingly as white, coppery, yellowish or dark, and may turn necrotic. The signs and symptoms of herpes closely resemble those of *loothavisha*

In view of these similarities, Ayurvedic treatment of HZ is done based on *Lutavisha* treatment principles. Similar management of a few cases of HZ was done in Ayurveda College, Kannur which affirmed the role of *Agadayogas* in proper healing and prevention of complications.

CASE REPORT

A 38-year-old lean-built female patient came to *Agadatantra* OPD with complaints of a fluid-filled vesicle over the left side of the trunk below the breast for 3 weeks associated with pain and burning sensation.

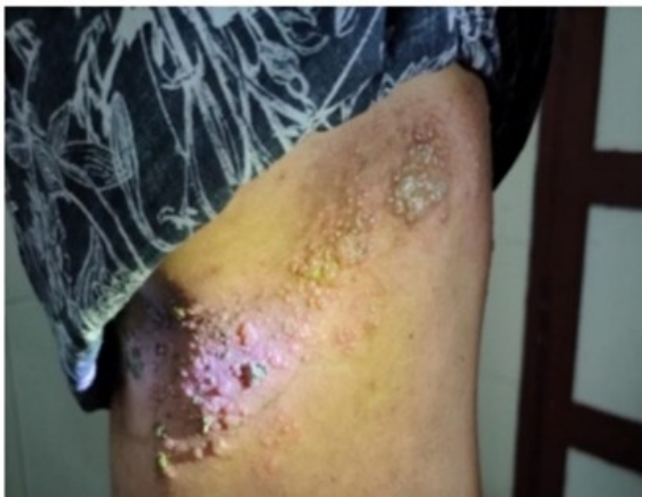

IMAGE 1 - 17/3/2022

History of present Illness

3 weeks ago this asymptomatic female noticed fluid-filled blisters on the left side of the trunk below the breast and it was associated with a burning sensation. The pain aggravated when she lay on her left side. Gradually it became clusters and the pain and burning sensation became severe. On consulting a General physician, the condition was diagnosed as Herpes Zoster. She did not get relief for the symptoms with contemporary treatment.

History of past Illness

H/o chicken pox –at 14 years of age

Family History: Nothing significant.

Personal History

Habit: Nothing specific

Bowel: Irregular, constipated

Appetite: reduced

Micturition: 5-6 times/day, burning micturition

Sleep: disturbed due to severe pain

General examination

Built – moderate, Temperature -98.6" F, height -154 cm, weight -55 kg, pulse – 75/min, respiratory rate -19/min, heart rate – 74/min, BP -110/60 mm of Hg

Systemic examination

CVS, Respiratory system, Nervous system, locomotor system – no abnormalities found

Integumentary system – vesicular eruptions of varying size over the left thoracic region below the breast. Tenderness and slight raise in temperature – present.

Ashtasthana pareeksha: Nadi- 74/min, Mutra -5-6 times/ day, Mala –sadharanam, Jihwa –Lipthata, Shabda –spashta, Sparsha -Anushnasheetha, Druk –Prakrutha, Akruthi – karsya, Prakruthi – vatakapha

Vitals –B.P -110/60mm of Hg, RS – on auscultation no murmur Sound detected, CVS, CNS: Intact

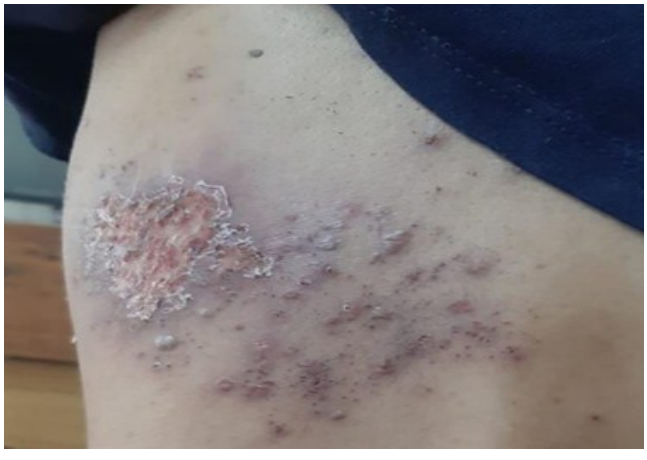

IMAGE 2 – 24/3/2022

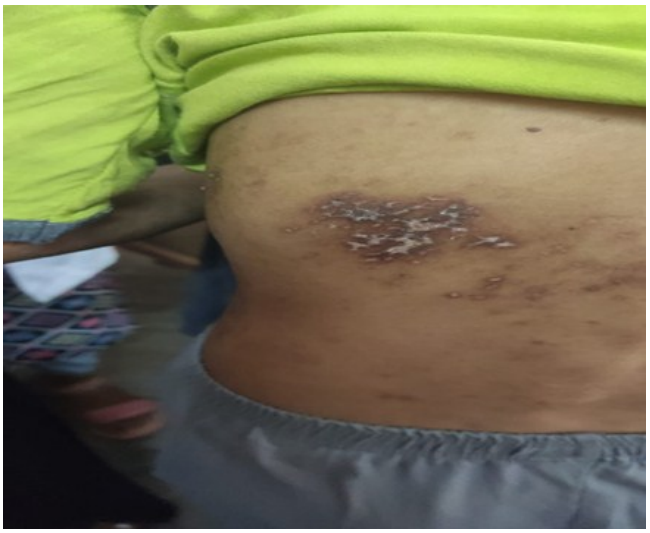

IMAGE 3 – 7/4/2022

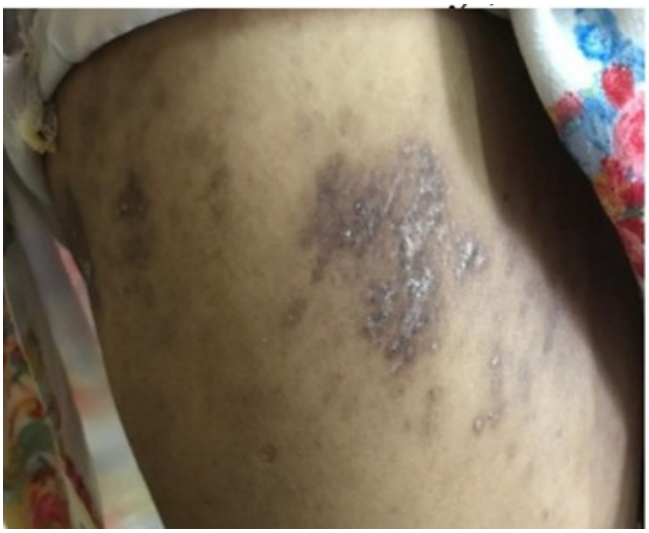

IMAGE 4 -21/4/2022

Table no:1 – Treatments given

DATE	OBSERVATIONS	TREATMENT GIVEN	DOSAGE
17/3/2022	Vesicles with a burning sensation Grade 4 tenderness	*Patoladi kashayam* *Vilwadi gulika* *Kottamramachadi ksheera kwatham* *Avipathy choornam* *Lodhrasevyadi kashayam*	90ml bid 1-bid Sekam*, Pichu* 5gm HS Panam
24/3/2022	Blisters over the thoracic region healed, tenderness and burning sensation reduced	*Patoladi kashayam* *Vilwadi gulika* *Kottamramachadi ksheera kwatham* *Avipathy choornam* *Lodhrasevyadi kashayam*	90ml bid 1-bid *Sekam, Pichu* 5gm HS *Panam*
7/4/2022	Blisters healed with dry scab formation, tenderness – grade 2	Jalookavacharana Lodhrasevyadi kashayam Ksheerabala 7 A	*Panam* External application (Q S)
14/4/2022	*Lesions completely cured, pain and burning sensation - relieved*	*Ksheerabala 7 A*	External application *(Q S)*

Discussion

Herpes zoster is a reactivation of infection of a virus (an *agantu* factor) and its triggers include stress or immunocompromising factors. Herpes Zoster is generally compared to *Visphota, Kaksha* and *Visarpa* based on its presentation, distribution or severity. The treatment principles of *Visphot*a and *Kaksha* are the same as that of *Visarpa* and it includes *Rukshana, Langhana, Vamana, Virechana Raktamoksha* and *Ruksha, Seeta* external applications. But based on the similarity in clinical features with those of *loothavisha*, the use of medicines prescribed for *Loothavisha* in classical and traditional *Visha chikitsa* texts has been employed in the management of HZ and is found to give considerable and rapid relief for symptoms[7]. It is also seen to prevent complications.

In the present case, there was no relief in signs or symptoms with contemporary medication even after 3 weeks and the lady had approached for *Ayurvedic* treatment to get relief for pain and burning sensation. She was given *Patoladikashayam*[8,9]and *Vilwadigulik*a[10] which was available in OPD, advised and *Lodhrasevyadi kashayam*[11] internally and Sekam with *Kottamramacchadi Ksheerakwatha*[12] externally.

Patolakaturohinyadi kashayam is an anti-toxic medicine also indicated for skin disease and fever. Studies show that it is a facilitator of bio-availability and has antimicrobial activity, anti-inflammatory, anti-oxidant and immunomodulatory activity[8]. It is widely used in viral infections.

Vilwadi gulika is indicated for all envenomations including *Luta visha* and microbial infections. Most of the ingredients are *Vatakaphahara, Vranahara* and *Vishahara*. The phytochemical constituents identified from *Vilwadi gulika* are shown to have antiviral[10], anti-inflammatory and immunomodulatory properties.

Lodhrasevyadi agadam[11] is a formulation mentioned in *Ashtanga Hridayam* in the context of *Lootha visha*. The ingredients are found to have *Pitha Kapha Samaka*, *Raktasodhaka, Vrunaropaka* and *Kledahara* properties.

The ingredients of *Kottamaramacchadi* [12]yoga are *Kushta, Usheera, Neelini* and *Chandana*, mentioned in Prayoga Samuchaya *Luta visha prakaranam*. It is *Tridosha samana* and has *Visarpahara, Vrana ropana* properties. All ingredients except *Kushta* being *Pittahara* and cold in potency, are effective in reducing the burning sensation and inflammation. *Kushta* is *Vatahara* and has proven analgesic and anti-inflammatory action.

The mainstay of *Visarpa*, as well as *Visha chikitsa,* are *Sodhana* and *Raktamoksha*. In the present case, the patient was weak and emotionally unstable due to severe pain and sleeplessness and could not undergo *Virechana*. Hence *Anulomana* was done with *Avipatti churna*[13] and *Raktamoksha* with *Jalooka* as the present condition shows a predominance of *Pitta. Avipatti churna* is the formulation mentioned in *Virechana Kalpa* of *Ashtanga Hridaya*. In small doses, it is *anulomana* as well as *Pittasamana. Jalookavacharana* is indicated for *raktamoksha* in *Pitta*-predominant conditions. The bio-active substances in leech are shown to have analgesic, anti–inflammatory and anti–microbial effects[14]. Leeching is shown to interfere with extracellular communication through various exosomes which help in reducing the viral load, reduction of symptoms and prevention of complications.

Ksheerabala tailam, mentioned in *Ashtanga hridaya,* is a formulation containing *Bala kwatha, ksheera and tilataila,* It is *Rasayana, Indriya prasadana* and mitigates *Asrugdosha*. It has a neuroprotective action and helps in relieving the pain and tenderness It is used in the treatment of neurological disorders like facial palsy and trigeminal neuralgia. Studies have shown that it reduces oxidative stress in rat brains and significant anti-inflammatory action was also observed[15]. Sata or Sahasra paka of the taila greatly enhances its action.

Conclusion

Clinical presentation of herpes zoster being vesiculo pustular eruptions associated with intense pain and burning sensation, it can be correlated to *Visarpa, visphota* and *kaksha*. The manifestation of herpes zoster is similar to the clinical features of *Loothavisha*. Recovery of the patient from the distressing disease proves that the *Agada yogas explained in Loothavisha prakarana* in both Samhithas and Keraleeya Visha chikitsa granthas, when employed in the treatment of herpes zoster and similar conditions, provide fast relief and prevent complications.

Patient perspective

DECLARATION OF PATIENT CONSENT

Authors certify that they have obtained patient consent, where the patient/ care giver has given his/ her consent for reporting the case along with the images and other clinical information in the journal. The patient/ care giver understands that his/ her name and initials will not be published and due efforts will be made to conceal his/ her identity.

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CONFLICTS OF INTEREST

There are no conflicts of interest.

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