VARICELLA AND HERPES ZOSTER (NAMLA MINȚAQIYYA) UNANI PERSPECTIVES: A HOLISTIC APPROACH TO MANAGEMENT

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Review Paper

Received: **02.02.2025** Revised: **13.03.2025** Accepted: **25.03.2025**

ABSTRACT

Varicella and herpes zoster are two distinct clinical diseases caused by the herpesvirus varicella-zoster virus (VZV). Varicella is a contagious exanthem that typically occurs in children and presents with scattered lesions. It is more severe in adults and immunocompromised persons, with potentially fatal outcomes. Live attenuated Oka VZV vaccinations have eradicated varicella, whereas Herpes zoster is a painful, rash-like illness with chronic neuropathic pain. Therapeutic alternatives include antiviral medication, analgesics, and immunizations with Shingrix. From the perspective of Unani medicine, it is a condition where very small, superficial Buthūr (eruptions) appear on the skin, and inflammatory areas expand quickly. According to Unani's medical principles, it is a condition that occurs with burning, itching sensations, and an Anti-biting sensation. These eruptions, called Buthūr, may either resolve spontaneously or ulcerate. The Unani system of medicine provides a concise description of the disease along with the treatment protocols and lists out individual as well as composite pharmacological agents. This paper discusses its etiology, pathology, features, and different treatment modalities presented by the ancient Unani scholars. The purpose of this article is to increase awareness about Herpes Zoster (Namla Mintagiyya) and to share Unani's knowledge with safe, cost-effective, and alternative treatment options.

No. of Pages: 6 No. of Figures: 1 References: 24

Keywords: Namla Mintaqiyya, Herpes Zoster, Shingles, Varicella, VZV, Unani Management.

Abbreviations:- Varicella-Zoster Virus (VZV), Herpes Zoster (HZ), Herpes Simplex Virus (HSV), Post-Herpetic Neuralgia (PHN), Glycogen Synthase Kinase-3 (GSK-3), Open Reading Frame (OrF), Aquired Immuno Deficiency Syndrome (AIDS), Enzyme Immunoassays (EIA), Enzyme Linked Immuno Sorbent Assay (ELISA), Polymerase Chain Reaction (PCR), Recombinant Zoster Vaccine (RZV), Zoster Vaccine Live (ZVL), Advisory Committee on Immunization Practices (ACIP).

INTRODUCTION

The varicella-zoster virus (VZV), a member of the herpesvirus family, is the causative agent of both varicella (chickenpox) and herpes zoster (Shingles). Although these illnesses share the same viral origin, their clinical manifestations differ significantly due to variations in the virus's behavior and the immune system's response. Varicella, most commonly seen in childhood, is a highly contagious disease that arises from an initial external infection in individuals who

have no prior immunity. It presents as a widespread vesicular rash accompanied by fever and general malaise. Once the primary infection resolves, the virus remains dormant in the sensory ganglia of the nervous system. Herpes zoster, or shingles, occurs when the dormant virus is reactivated later in life, often triggered by factors such as aging, stress, or immune system compromise. Reactivation leads to the virus traveling along sensory nerves, resulting in the characteristic symptoms of shingles. The condition

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typically begins with localized pain or tingling, followed by the appearance of a rash limited to the affected dermatome; a specific area of skin innervated by a single spinal nerve. The rash evolves into closely grouped pustules filled with clear fluid or pus and is often accompanied by severe nerve pain, burning sensations, and sharp, stinging discomfort. Shingles is a highly distressing condition, significantly impacting daily activities and quality of life. For some, the pain persists long after the rash resolves, a complication known as post-herpetic neuralgia. Early diagnosis and treatment with antiviral medications and pain management strategies are essential to alleviate symptoms, shorten the disease course, and prevent complications. Vaccination, particularly in older adults, plays a vital role in reducing the risk of shingles and its associated burdens.[1-5]

Concept of Namla Mint □aqiyya In Unani Medicine The Great Ancient Unani Physicians stated about the disease in their classical Unani books. Some of this literature is given below;

- ➤ Kirmani Nafees bin Auz in his book Moalajat Sharah Asbab: Namla Mint aqiyya, also known as migrating pustules, are itchy eruptions that cause burning and inflammation in the body. The patient experiences extreme discomfort as if their skin were on fire. The combination of blood and bile causes these blisters to expand somewhat. These blisters spread quickly, much like an ant, which is why they are named Namla (Ant). Another possibility is that Namla got its name from the acute itching that resembles an ant bite. [6]
- ➤ Ibn Sina stated in Al-Qanun fil-Tibb:- Namla Mint aqiyya appears as single or multiple blisters on the skin. However, as the severity of the condition increases, the affected area becomes painful and inflamed. [7]
- Qamri Abu al-Mansur al-Hasan and Ibn Hubal
 write in their classical literature Ghina Muna and
 Kitab al-Mukhtarat fi'l-Tibb:- They define the
 illness as a minor warm (swelling) that manifests
 as little breakouts and has a burning and itchy
 feeling that gets worse when touched. This rash
 spreads rapidly before going away. Excess Safr□'
 in the blood is the reason.[8]
- Ibn Hubal in his another famous book Kitab al-Mukhtarat fi'l-Tibb:- These blisters, known as

Namla jawarsa, might occasionally mimic millet kernels. These are tiny, millet-like papules with mild skin edema.[9]

Historical Background In Modern Medicine

In 1892, 5 cases of varicella were reported in children exposed to adults with herpes zoster. Over the next 50 years, clinical and histologic evidence supported the idea that susceptible individuals could develop varicella after exposure to someone with herpes zoster. Children who were exposed to herpes zoster vesicle fluid developed varicella, even if they had no prior experience of the virus. In the 1950s, viruses from varicella and herpes zoster were shown to exhibit comparable characteristics in tissue culture and immunofluorescence methods. Nucleic acid analysis revealed that viruses isolated from varicella and herpes zoster in the same patient were similar.[10-16]

Epidemiology of Varicella and Herpes zoster

Varicella is a disease with varying incidences in temperate and tropical climates and populations receiving the vaccine. In temperate climates, it is endemic, with 90% cases in children under 15. The US has seen a significant reduction in varicella-related morbidity, with two-dose vaccine coverage exceeding 90% in young children. The disease is highly contagious, with attack rates of 87% among susceptible siblings and 70% among hospitalized patients. Herpes zoster is a sporadic infection independent of varicella prevalence, with an incidence of 2-5 per 1000 personyears in community-dwelling populations. Age is a major risk factor, with 1.5 million new cases in the US each year. Immunocompromised patients have a greater risk, with 10% of cases occurring in immunocompromised patients. Recurrent herpes zoster is more common in immunocompromised patients. The virus can be isolated from vesicles and spreads through direct contact, airborne transmission, and aerosols.[17-20]

Causes and Etiological Factors[21-31]

The main cause of this disease is Varicella zoster virus and the virus is responsible for measles, in some individuals, may remain dormant even after the visible symptoms of the disease have disappeared. In these cases, the virus hides in a latent state within the dorsal root ganglia. When the immune system or sensory inhibition in the dorsal ganglia weakens, the virus can reactivate, leading to the development of shingles, a painful condition characterized by a rash and nerve inflammation.

- ➤ VZV is a neurotropic human herpes virus, responsible for primary infection resulting in varicella and reactivation of latent infection.
- ➤ The virus only infects human cells, namely epithelial cells, T lymphocytes, and ganglionic neurones.
- ➤ Virus entrance into brain cells is facilitated by heparan sulphate proteoglycan and the GSK-3 pathway.
- Varicella is transmitted by respiratory droplets or smears from vesicular varicella lesions.
- > The incubation period for varicella varies between 10 and 21 days, with contagiousness from 1 to 4 days before the cutaneous rash and until all vesicular cutaneous lesions have dried up.
- > VZV infection in pregnancy can spread via placenta, leading to fetal infection.
- ➤ Vaccination can reduce the HZ risk by 64% in children after vaccination for varicella.
- ➤ VZV becomes latent in nervous tissue, detected in dorsal root ganglia, cranial nerve ganglia, and various autonomic ganglia in the enteric nervous system, and in astrocytes.
- ➤ VZV latency is associated with open reading frame (orF) 63, and reactivation is considered a result of loss of immune surveillance.
- Upon reactivation, VZV replicates within cell bodies of neurons, causing inflammation and vesiculation.

Age and Risk Factors[32]

Common Age Group:

➤ The condition is more frequently observed in individuals aged 20–50 years.

Increased Risk in Older Adults:

- ➤ For people aged 50-60 years, the risk of developing Namla Mint \(\text{agivva} \) doubles.
- ➤ In individuals aged 60-80 years, the risk triples.

Early Childhood Impact:

If a person experienced Humaiqa before the age of 1.5 years, they are highly likely to develop Namla Mintaqiyya by the age of 18 Years.

Other Underlying Factors[32]:

Weakening of Inhibitory Power: A decline in the body's ability to suppress or control underlying conditions contributes to the development of the disease.

Symptoms and Contributing Conditions:

Chronic Diseases: Conditions like AIDS and cancer significantly increase susceptibility.

Prolonged Medical Treatments: The use of anticancer drugs or other immunosuppressive treatments can weaken the immune system, elevating the risk.

Mental Health Disorders: Psychological conditions may also contribute to the onset or exacerbation of $Namla\,Mint\,Aqiyya$.

Types of Zoster Infection[32]

1. Zoster Ophthalmics

Affected Nerve: Ophthalmic branch of the fifth cranial nerve (trigeminal nerve).

Symptoms: Lesions appear on the forehead, sides of the eyes, and sometimes on the cornea. Can cause disorders like conjunctivitis, corneal ulcer, uveitis, and vision loss.

Complications: Rarely leads to optic nerve palsy, which may cause additional vision problems.

2. Zoster Oticus

Affected Nerve: Nasociliary branch of the fifth cranial nerve (trigeminal nerve).

Symptoms: Rash occurs at the base of the nose, its sides, and on the ridges of the cheek. Severe ear pain is common. Can cause symptoms on the affected side of the face.

3. Disseminated Zoster

Affected Areas: Neck, chest, and upper abdomen.

Symptoms: Over 20 clusters of pustules are found in the affected areas.

Risk Groups

- Commonly affects individuals with weakened immune systems, such as those with AIDS or lymphoreticular carcinoma.
- > These forms of zoster differ in presentation and complications, often depending on the specific nerve or body region involved.

Pathophysiology[33-35]

Pathogenesis of Varicella:- VZV enters the upper respiratory tract and oropharynx, infecting tonsillar T cells. Viremia occurs early, but innate immune responses delay replication. Secondary viremia occurs 10-14 days after infection, causing systemic symptoms and skin lesions. T cell-mediated immunity is required for recovery.

Pathogenesis of Herpes Zoster:-Varicella virus (VZV) enters sensory nerves and establishes latent infections in neurons, with the highest density in dermatomes. Latent VZV may reactivate sporadically, producing infectious virus, but it can also reactivate without disease. When VZV-specific immunity falls below a critical level, the virus spreads, causing neuronal necrosis and inflammation. The virus can also cause complications in the central nervous system.

Clinical Picture of Varicella

- Prodrome: Prodromal symptoms are rare in young children, followed by mild fever, chills, malaise, headache, anorexia, backache, sore throat, and dry cough in older children and adults.[36]
- Rash:- Varicella is a skin condition characterized by rapid growth of macules, papules, vesicles, pustules, and crusts, often presenting in areas of inflammation, particularly in immunocompromised patients.[36]
- Fever:- Usually persists as long as new lesions continue to appear, and its height is generally proportional to the severity of the rash. It may be absent in mild cases or rise to 40.5°C (105°F) in severe cases with extensive rash. Prolonged fever or recurrence of fever after defervescence may signify a secondary bacterial infection or another complication. [36]
- ➤ **Pruritus:-** The most distressing symptom is pruritus, which is usually present until all lesions are crusted.[36]
- ➤ **Breakthrough Infection:-** Vaccines who get a single dose of varicella vaccination may develop "break-through" varicella after exposure to active

VZV infections. Breakthrough varicella is frequently unusual. The rash is mostly maculopapular, with less than 60 lesions and fewer vesicles compared to unmodified varicella. These patients shed VZV, but are less infectious than those who are not inoculated. The frequency and intensity of fever is lower than in spontaneous varicella. Routinely administering a second varicella vaccination has significantly decreased the occurrence of the illness and its associated complications.[36]

Clinical Picture of Herpes Zoster [37-39]

Prodrome:- Prodromal pain in herpes zoster typically precedes eruption by 1 to 3 days, with itching, tingling, burning, and sometimes a deep, borering, or lancinating pain. It may be confused with visceral organ pain, leading to misdiagnosis and misdirected interventions. It occurs in most patients over 60 years old.

Rash:- Herpes zoster s a unique rash that is unilateral and limited to the skin innervated by a single sensory ganglion. It is most common in the skin supplied by the trigeminal nerve, particularly the ophthalmic division (10-15%) and the trunk from T3 to L2. The rash is most severe in older people and least severe in children. Ophthalmic zoster affects 10% to 15% of cases, affecting the eye, mouth, ears, pharynx, and larynx.

Pain:- Herpes zoster, a common rash, is characterized by severe pain, particularly in the elderly. Over 85% of patients over 50 experience mild to severe discomfort, often described as burning, aching, tingling, or stabbing. This pain can lead to physical, emotional, and social impairment.

Pruritus:- Itching is often a prominent and distressing symptom throughout the acute phase of herpes zoster. It frequently persists until all crusts have fallen off.

Table 1: Differential Diagnosis of Varicella and Herpes Zoster[40].

Varicella	Herpes Zoster		
➤ Vesicular exanthems of Coxsackie-viruses and echoviruses	> Zosteriform herpes simplex		
► Eczema herpeticum	Contact dermatitis		
≽∎Impetigo	> Insect bites		
≻■Rickettsialpox	≻■Burns		
► Insect bites			
➤ Disseminated herpes zoster			
➤ Disseminated herpes simplex			
Contact dermatitis			

Table 2: Diagnostic Features[41-44]

Feature/Method	Details	Advantages	Limitations
Histopathology	Multinucleated giant cells, acanthosis, ballooning degeneration, acidophilic intranuclear inclusion bodies.	Distinguishes VZV from most other vesicular eruptions (except HSV).	Invasive, requires expertise, and not always definitive.
Tzanck Smear	Detects multinucleated giant cells and inclusion bodies using stains (H&E, Giemsa).	Quick, bedside preparation.	Cannot distinguish between VZV and HSV.
Polymerase Chain Reaction (PCR)	Detects and differentiates VZV, HSV, and VZV vaccine strains using vesicle fluid, lesion scrapings, etc.	High sensitivity and specificity; rapid (≥1 day).	Expensive; requires specialized equipment.
Virus Isolation	Inoculation of vesicle fluid into fibroblast tissue cultures; infectious virus yields further analysis.	Can determine antiviral sensitivity.	Time-consuming (≥1 week); low sensitivity.
Immunofluorescence/ Immunoperoxidase	Stains cellular material from vesicles or prevesicular lesions.	Faster than culture; high detection rate.	Less sensitive and specific than PCR.
Enzyme Immuno assays (EIA)	Detects antigens or antibodies using ELISA techniques.	Rapid, simple technique.	Lower sensitivity than PCR; false results possible.
Serologic Tests	Retrospective diagnosis using acute and convalescent sera.	Useful for identifying susceptibility in individuals.	Rarely done; low sensitivity in vaccinated individuals.

Table 3: Management In Modern Medicine Treatment of Herpes Zoster[45-68]

Clinical Type	Treatment	Status	
Disseminated zoster	> 500mg/m² of acyclovir, intravenously every four hourly for 7 days.	 Aborts dissemination Decreases pain Reduces the time required for healing 	
Localized herpes zoster	 800 mg of acyclovir, orally, five time a day for 7 days. Cold compression using 1 in 20 Burrow's solution, Topical application of 5% Acyclovir, every 4 hours. 	 Reduces pain Arrests new lesion formation provided the treatment is started within 48 hours. Promotes healing 	

	AAAA	Application of Calamine lotion. 400 mg of ibuprofen (Brufen) thrice a day. 500-1000 µg of Triredisol-H (vit B12) intramuscular, twice a week for 5 weeks. 40-60 mg of prednisolone in two equally divided doses at 9 AM and 6 PM for 5 to 7 days and subsequently tapered over 3 to 4 weeks.		
Post herpetic neuralgia	>	Topical application of capsaicin cream (Zostrix), thrice a day	~	Aborts post-herpetic neuralgia
	A	75 mg of amitriptyline four times a day along with 4 mg of perphenazine or 1 mg of fluphenazine hydrochloride four times a day		
	>	600 to 800 mg of carbamazepine (Tegretol) or 300-400 mg of phenytoin sodium (Dilantin) in two or three divided doses along with 50 to 100 mg of nortriptyline		
	>	1000 mg of carbamazepine (Tegretol) every day with 75 mg of cloimipramine.		

Management In Unani Medicine [69]

The management of disease in unani medicine is basically based on the three treatment modalities; It comprises of 'Ilaj bi'l Tadbir (Regimenal Therapy), 'Ilaj bi'l Ghidhi' (Dieto-therapy), Ilaj bi'l Dawa' (Pharmacotherapy).

Usul-i-'Ilaj (Principles of treatment)

- > Address the root cause.
- > *Tanqiya*' of *Balgham* from body.

- > Systemic therapy by *Musaffi-i-Dam* advia.
- Tahlil wa Tajfif (Resolution and Desiccation).
- ➤ *Islah-i Hadm* (Correction of digestion).
- Prevent patients from becoming constipated.
- ➤ Boost the activities of the liver and stomach.
- > Strengthen and control the immunological system.
- > External application of *Dafi'-i-Ta'affun* (antiseptic) and *Mujaffif* (desiccant) medications.

Ilaj bi'l Dawa'

Table 4: Mufrad Advia (single drugs) [6-9,70-72]

Common Name	Scientific Name	Common Name	Scientific Nmae	Common Name	Scientific Nmae
1. Peppermint	Mentha piperita	2. Mango	Mangifera indica	3. Gum acacia	Acacia arabica
4. Pistachio	Pistacia vera	5. Marjoram	origanum marjorana	6. Gum Ammoniac	(See Ammoniacum)
7. Plantain	Plantago major	8. Marshmallow	Althea officinalis	9. Habbulas	Vitex trifolia
10. Mugwort*	Artemisis vulgaris	11. Marva	Malva sylvestris	12. Henna	Lawsonia inermis
13. Mustard*	Brassica nigra [juncea]	14. Masterwort	Heracleum lanatum	15. Hops	Humulus lupulus
16. Myrobalen	Emblica species	17. Mastic	Pistacia lentiscus	18. Horehound	Marrubium vulgare
19. Myrrh	Commiphora myrrh	20. Meadow Saffron*	Colchicum autumnale	21. Hyssop	Hyssop officinalis
22. Myrtle*	Myrtus communis	23. Mecca Balsam	Balsamodendron opobalsamum	24. Indian jujube*	Zizyphus jujuba

22. Myrtle*	Myrtus communis	23. Mecca Balsam	Balsamodendron opobalsamum	24. Indian jujube*	Zizypbus jujuba
25. Neem (Margosa)	Melia azadirachta	26. Melilot	Melilotus officinalis	27. Jasmine	Jasminum officinale
28. Nutmeg	Myristica fragrans	29. Lily of the Valley*	Convallaria majalis	30. Garlic	Allium sativum

Some Compound Formulations (Pharmacotherapy) [27]

- Jawarish Jalinoos, Ma'Jan Dabidulward, Qurs Sartan Kafari, And Khamara Marwareed To Improve Your Immunological and digestive systems.
- Give patients a mixture of Labūb Behdana, Shīra Unnab, And 'Araq Shahtara, Along with Sharbati-Unnab.
- For Three to five days, give the patient a decoction of *Sagmonia* and *Fawākih*.
- Give 3gm of Safūf or Two Tablets of Qurs Musakhkhin For Tabrīd And Taskhīn.
- Safuf Khaksi should be added to the aforementioned medication if the patient has a fever.
- Make a Distillate By Extracting Three Grammes of Shahtara, Three Grammes of Gule-i- Mundi, Three Grammes of Gul-i-Nilofer, Three Grammes of Chiraita, and Three Grammes of Barg-i-Heena. Give Patients 30–40 ml Twice a Day.
- Make the decoction using 6g of *Makoh*, 6g of *Kasni*, 6g of *Tukhm-i-Kasoos*, 12g of *Aloo Bukhara*, And 9g of *Tamar Hindi*. Times a Day.

Local Application [27]

- Make a powder from the following ingredients if blisters turns into ulcers: *Mazo* (3gm), *Gulnar* (3gm), *Murdaresang* (3gm), And '*U*□āra Rewand (6gm). Add Roghan-i-Gul or Wax, and apply for local application.
- Apply As a Paste After Combining Barg Habul Aas And Mazo With Wax And Roghan-i-Gul.
- Make a *Khaskhash* Decoction and apply it to the afflicted region as a moist compress.
- ➤ In the event of extreme pain, combine 5 Grammes of *Afiyūn*, 6 Grammes of *Barge Qinnab*, And 2 Grammes of *Bazrulbanj* with water to create a paste that may be administered to the afflicted region.
- Use a Blend of 'Arq-i-Leemu And Roghan-i-Chameli.

- Apply For $Rasa\bar{u}t$ In $\bar{A}be$ Kishneez or $\bar{A}be$ Makoh.
- Prepare Safūf From Mazu, Sandal, Post-Anar, And Gul-i-Armani To Relieve Itching And Irritation. Apply Safūf as a paste to the afflicted region after mixing it with Sīrka or 'Arq-i-Gulab.
- Ø Apply a Paste Consisting of Aqaqia, Rasaūt, And Sandal.

Some Unani Formulations Addressed By The Great Unani Physicians

Unani medicine, emphasizes the balance of the four humors of the body (blood, phlegm, yellow bile, and black bile) for maintaining health. Ancient unani physicians prescribed a variety of herbal and natural formulations to address various ailments. Below are some notable unani formulations recommended by these physicians, with explanations of their ingredients and uses:

- Treat the disease based on Its underlying cause.
- ➤ To Administer Mun if And Mushil-i-Safra', Use a Decoction of Haleela, Tamar Hindi, And Saqmonia To Eliminate Excess Safra' From The Body. [6-9]
- Make a Paste Using Tamar Hindi, Mako Khushk, Tukhm Kasūs, Tukhm-i-Kasni, Saqmonia, Turbud, Sikanjabīn, Post Anar, Sandal, Maye Kalan, Gule Armani, And Araq Gulab. Dissolve The Paste With Sirka And Apply The Liniment To The Afflicted Areas.[8]
- Apply a Topical Paste Including 'Araq Kasni, 'Araq Mako, Ābe-i-Sada Bahar, Ābe Khurfa, Kadu, Sandal, 'Araq Gulab, Kafūr, Bhang, and Afiyūn To The Afflicted Region.[9]
- Another Cure Is To Apply *Tila*, a Mixture of *Post-Anar*, *Sīrka*, *And* '*Araq Gulab*'.
- ➤ If The Problem Causes Ulcers, Use Marham Safaidah To Cure Them.
- For Namla Jāwarsiyya, Ma'Jūn Ushba and Ma'Al-Jubn Are Quite Useful.[7]
- Administer, *Munaij, Mushil-i-Safra*', and *Balgham* evacuate unhealthy materials from the body.

- > To cure *namla*, give cooling and drying actions to counterbalance moisture from the ulcer. Moisture hinders wounds from healing and increases inflammation.[6,8]
- Serve a drink made from $\bar{A}be Imli$, $\bar{A}be Anar Tursh$, and $\bar{A}be Faw\bar{a}kih$ mixed with Sugar.[72]
- In His Work *Al-Qānūn Fi'l-Tibb*, *Ibn Sīnā* Recommends Using *Ma'Al-Jubn* with *Saqmonia* to remove diseased materials.[71]
- ➤ Apply *Tila* (Liniment) topically to chill and dry the papules.[70]

Ilāj bi'l Tadbīr (Regimenal Therapy)[73-75]

- > Tanqiya of body and head.
- Faad of Adjacent area of affected part of the body which decreases the pain as well as symptoms of Namla and evacuate the morbid material from the affected site

- ➤ Ishal.
- > Istifragh balgham from the body and brain.

Ilāj bi'l Ghidhā' [76-78]

Use of meals that are easy to digest (Ghidhā' Sarī' al-Inhidām), such as chapati and soups. Utilising vegetables with cold-related qualities (Ghidhā' Bārid)Use mainly Ghidhā'-i-Sāda (basic food items), such as mutton, Shalgham (turnip), Mūng (green gramme), Arhar (split red gramme), Kaddu (pumpkin), Palak (spinach), Turai (ridge gourd), etc. Consuming fruits like oranges, pomegranates, apples, and pears on a regular basis Steer clear of Radī (trash), Fasid (putrified), and Nāfikh Aghdhiya (flatulent), such as Gobhi (cauliflower), Matar (pea), and Māsh ki daal (black gramme)

Table 5: Complications of Herpes Zoster [40].

Cutane	eous	Visceral	Neurologic
1	cterial perinfection	> Pneumonitis	> Postherpetic neuralgia
> Sca	arring	> Hepatitis	> Meningoencephalitis
> Zo:	oster gangrenosum	> Esophagitis	> Transverse myelitis
	ntaneous esemination	> Gastritis	Peripheral nerve palsies Motor Autonomic
		> Pericarditis	> Ocular complications
		> Cystitis	> Cranial nerve palsies
		> Arthritis	> Deafness
			> Sensory loss
			 Granulomatous angiitis (causing contralateral hemiparesis)

Complications of Varicella [79-88]

- In the normal child, varicella is rarely complicated, with the most common complication being secondary bacterial infection of skin lesions.
- ➤ Invasive group A streptococcal infections are common, often occurring within 2 weeks of the onset of the varicella rash.
- ➤ In adults, fever and constitutional symptoms are more prominent and prolonged, the rash is more profuse, and complications are more frequent.
- A small number of patients develop varicella pneumonia, the major severe complication of varicella in adults.
- Varicella during pregnancy is a threat to both mother and fetus, with the incidence and severity

- of varicella pneumonia not significantly increased by pregnancy.
- Perinatal varicella is more serious than varicella in infants infected even a few weeks later.
- ➤ The morbidity and mortality of varicella are markedly increased in immunocompromised patients, leading to prolonged high-level viremia, more extensive rash, prolongation of new vesicle formation, and clinically significant visceral involvement.
- > Immunocompromised patients may also develop Pneumonia, Hepatitis, Encephalitis, and Hemorrhagic complications of varicella.
- CNS complications of varicella include several distinct syndromes, including varicellaassociated Ray Syndrome, Acute Cerebral Ataxia, Encephalitis, and Hemorrhagic complications.
- Clinical hepatitis is rare, except as a complication in immunocompromised patients. Other rare complications include Myocarditis, Glomerulonephritis, Orchitis, Pancreatitis, Gastritis, Ulcerative Lesions of the Bowel, Arthritis, Henoch-Schönlein Vasculitis, Optic Neuritis, Keratitis, and Iritis.

Prevention[89-102]

The prevention of herpes zoster requires preventing reactivation of latent VZV that results in clinical disease. Live attenuated Oka VZV zoster vaccines (ZVL) are recommended for adults 60 years of age and older to prevent or attenuate herpes zoster. The clinical rationale for zoster vaccine is the substantial morbidity of herpes zoster in older adults and the need to initiate antiviral therapy within 72 hours of rash onset. ZVL has proven to be effective in reducing the burden of illness due to herpes zoster, clinically significant PHN, and herpes zoster. However, its efficacy declined over time, and there is currently no recommendation for revaccination from the Advisory Committee on Immunization Practices (ACIP). ZVL is contraindicated in immunocompromised persons but has been administered to a number of immunocompromised patients with very rare adverse events. The optimal time to immunize an individual after a recent episode of herpes zoster is unknown, and the optimal time to immunize an individual after a recent episode of herpes zoster is not known.

Administration of Guidelines for Herpes Zoster Vaccines (2018 ACIP Guidelines)[103]

- Recombinant zoster vaccine (RZV) prevents herpes zoster and associated sequelae in immunocompromised persons over 50 years old. RZV is given in two doses, two to six months apart.
- 2. Immunocompetent persons who have previously received the live attenuated zoster vaccination (ZVL) should get RZV to prevent herpes zoster and associated sequelae. RZV should not be provided within two months of receiving ZVL.
- 3. RZV is favoured over ZVL for preventing herpes zoster and its consequences.

Note: These suggestions enhance the current guidelines for using ZVL in immunocompetent persons aged 60 years or older. RZV can be delivered alongside other adult vaccinations at various anatomic locations. [104]

Data Accessibility

Using all available paper, electronic, and digital resources, this assessment was created. I searched for published articles, review papers, case reports, and research papers using PubMed, Google Scholar, Science Direct, Scopus, and other databases. We also read a lot of dermatological and cosmetology literature, both modern and Unani.

Conflict of interest

Declare no conflict of interest

Source of Funding

None

Ethical approval

Not applicable

Acknowledgments

The Deputy Director, Dr. Irfat Ara, The H.O.D of department of *Moalajat*, and the library staff of Regional Research Institute of Unani Medicine in Srinagar, University of Kashmir, The writers would like thanks for their assistance, support and access to a wide range of relevant material throughout the writing of this review.

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