

**#MADEEASY**



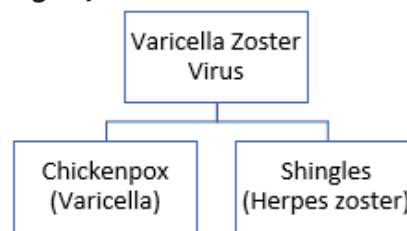
**VIRAL INFECTIONS: VARICELLA  
ZOSTER VIRUS HHV 3**





## VIRAL INFECTIONS: VARICELLA ZOSTER VIRUS HHV 3

- **Varicella-Zoster Virus (VZV) is a member of the herpesvirus family [human herpesvirus 3 (HHV-3)]**
- **It causes two distinct clinical diseases:**
- **Varicella (Chickenpox)**
- **Herpes Zoster (Shingles)**



### Pathophysiology

- **Primary Infection:** VZV causes **chickenpox**, usually during childhood.
- **After the initial infection, the virus becomes dormant in the sensory nerve ganglia.**
- **Reactivation:** Later due to immunosuppression, VZV can reactivate, causing shingles

### Varicella (Chickenpox)



- **Common in children**
- **Highly contagious through respiratory droplets or direct contact with lesions**
- **Incubation Period: 10-21 days**
- **Clinical Features**
- **Prodromal symptoms:** Fever, malaise, headache
- **Rash Development:**
- **Begins as maculopapular lesions à progresses to vesicles à finally crusts over**
- **Lesions appear in successive crops, leading to characteristic polymorphic rash (macules, papules, vesicles, crusts)**
- **Lesions typically start on the face, scalp, or trunk and spread to the extremities (centripetal distribution)**





## VARICELLA (CHICKENPOX)

- **Complications**
- **Secondary Bacterial Infection: Due to scratching**
- **Pneumonia: More common in adults**
- **Encephalitis**
- **Prophylaxis and treatment**
- **Varicella Vaccine: Prevents primary infection**
- **Post exposure prophylaxis: Acyclovir, IV Immunoglobulin**
- **Supportive treatment**
- **Acyclovir in severe/immunocompromised cases**
- **Imagine it to be like a starry night sky with various sized of different stars.**

### Herpes Zoster (Shingles)



- **Occurs when VZV *reactivates* in a sensory nerve ganglion, traveling along the nerve to the skin.**
- **More common in older adults and immunocompromised individuals**
- **Clinical Features**
- **Prodrome: Pain, burning or tingling in the affected dermatome**
- **Rash Development:**
- **Erythematous papules that rapidly evolve into vesicles**
- **Extremely painful due to nerve involvement**
- **Rash is typically *unilateral* and follows the distribution of a *single dermatome***
- **Vesicles eventually crust over and heal within 2-4 weeks.**





# HERPES ZOSTER (SHINGLES)

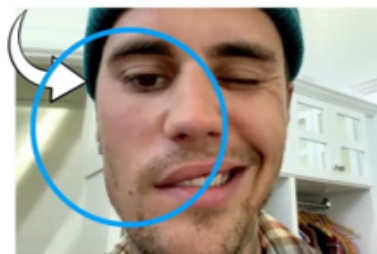
- **Complications**
- **Postherpetic Neuralgia:**
- **Persistent pain in the affected dermatome, lasting months to years after the rash heals**
- **More common in older adults**
- **Like lingering sparks of fire, PHN is the pain that refuses to go out even after the fire (rash) is gone**
- **Herpes Zoster Ophthalmicus:**



- **Involves ophthalmic branch of the trigeminal nerve (cranial nerve V)**
- **Vesicular rash on the forehead, eyelid and sometimes the tip of the nose (Hutchinson's sign)**
- **Can lead to serious eye complications like keratitis, uveitis, even vision loss**
- **It is like a tornado above the eyes, leading to serious problems if not treated**
- **Ramsay Hunt Syndrome:**



Facial paralysis



Justin Bieber





# HERPES ZOSTER (SHINGLES)

- **Involves Facial nerve (cranial nerve VII)**
- **Vesicular rash around the ear, auditory canal or mouth**
- **Facial paralysis, loss of taste in the anterior two-thirds of the tongue, hearing loss**
- **Like a thief in the night, Ramsay Hunt robs the face of its movement and the ear of its hearing**
- **Diagnosis**
- **Based on characteristic rash and distribution**
- **Laboratory Tests:**
- **Tzanck Smear shows multinucleated giant cells (for shingles)**
- **PCR can confirm VZV from vesicular fluid**
- **Management**
- **Shingles Vaccine: Recommended for older adults to reduce the risk of reactivation and severity of shingles**
- **Antiviral Therapy:**
- **Acyclovir, valacyclovir or famciclovir to reduce the severity and duration of symptoms.**
- **Early treatment is crucial, especially in immunocompromised patients.**
- **Pain Management:**
- **Analgesics, anticonvulsants (gabapentin) or antidepressants (amitriptyline) for postherpetic neuralgia**
- **Corticosteroids: May be used to reduce inflammation in severe cases**

Condition	Clinical Features	Complications
Chickenpox (Varicella)	Fever, malaise, vesicular rash in multiple stages	Secondary infection, pneumonia, encephalitis
Shingles (Herpes Zoster)	Painful, unilateral vesicular rash along a dermatome	Postherpetic neuralgia, Ramsay Hunt, ophthalmic involvement
Herpes Zoster <u>Ophthalmicus</u>	Vesicular rash on the forehead, eyelid, nose	Vision-threatening complications
Ramsay Hunt Syndrome	Vesicular rash near the ear, facial paralysis, hearing loss	Persistent facial weakness, hearing loss
Postherpetic Neuralgia	Persistent, burning pain after the rash has healed	Chronic pain

