

Shingles (Zoster)

Shingles

Shingles, also known as Zoster, is a skin and nerve disorder caused by the Varicella-Zoster Virus (VZV). People exposed to the VZV who have not had chicken pox as children or received a vaccine, will develop severe symptoms of chicken pox. People who have had chicken pox will develop symptoms of shingles. Like chickenpox, shingles is contagious when it comes in direct contact with your skin or others.

Causes

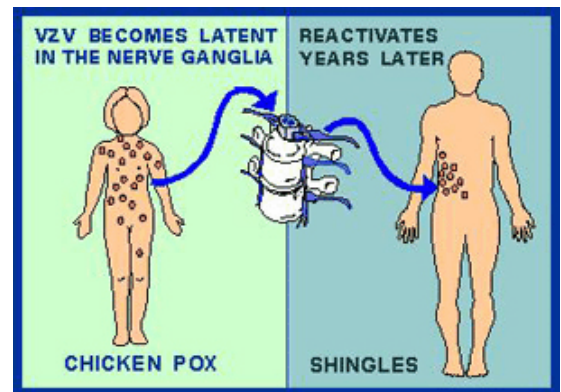
Shingles is caused by reactivation of latent varicella-zoster virus (VZV) infection in the nerves of the spinal cord due to failure of immune system.

Pathogenesis

After the body's exposure to the original varicella virus (chickenpox), the virus remains in nerves of the spinal cord in a dormant state for many years. In patients with a low VZV specific cell mediated immunity, the virus can become activated again and consequently travels to the skin and mucosa causing symptoms such as pain and rash.

Complications

- *Postherpetic neuralgia (PHN)**- most common chronic complication
 - * PHN is continued pain after resolution of the rash which can ultimately become a chronic pain syndrome. Pain and temperature sensation of the involved areas become very sensitive to the touch, resulting in severe pain. Risk factors for PHN include older age, being female, more severe pain, greater rash severity, infection of the eye area during shingles.
- *Dermatologic*: scarring, secondary bacterial infection, herpes gangrenosum (skin necrosis)
- *Neurologic*: motor neuropathy (muscle weakness), myelitis (swelling of spinal cord), encephalopathy (altered brain function or structure)
- *Ramsay Hunt Syndrome*: facial paralysis
- *Ocular*: conjunctivitis, choroiditis (inflammation of the layer of the eye behind the retina), retinitis (inflammation of retinoid), increased ocular pressure.
 - 8-10% of shingles cases are associated with ocular complications



Risk Factors

- Immune suppressed patients, e.g. cancer, diabetes, HIV, chronic corticosteroid use, are more prone to developing shingles. However, most patients have normal immune function.
- Aging
- Stress

Symptoms

- Unilateral (on one side) pain, tingling, or burning sensation
- Erythema (reddening of skin) followed by the appearance of blisters
- Grouped, dense, deep, small blisters
- Malaise or fever- occasionally



Compounded Treatment

Shingles Gel

- *Ketoprofen* 10%
 - Non-steroidal anti-inflammatory to reduce pain
- *Tetracaine* 4%
 - Anesthetic to reduce pain
- *2-Deoxy-d-glucose* 0.2%
 - Antiviral
- *Amitriptyline* 2%
 - To reduce nerve pain and prevent PHN

* Apply to affected area 2-4 times daily

Commercially Available Treatment

Shingles usually resolves on its own. However, treatment is used to reduce the symptoms, speed rash resolution and prevent complications

- Treatments that reduce acute pain
 - Corticosteroids, e.g. prednisone
 - Analgesics, e.g. Ketoprofen
 - Tricyclic Antidepressants, e.g. amitriptyline
- Antiviral treatment- Best to start therapy within 3 days of initial rash
 - Valacyclovir (Valtrex) 1 g PO 3 times daily for 7 days
 - Famciclovir (Famvir) 500 mg PO 3 times daily for 7 days
 - Acyclovir (Zovirax) 800 mg PO 5 times daily for 7-10 days
- Treatment for prevention of Postherpetic Neuralgia (PHN)- continued pain after healing of cutaneous zoster
 - Tricyclic Antidepressants have the best supporting evidence
 - ◆ amitriptyline
 - ◆ desipramine
 - Other therapies include capsaicin, gabapentin, oxycodone, tramadol, divalproex sodium, pregabalin

Reference:

1. dynaweb.ebscohost.com.catalog.llu.edu
2. Eastern J. "Herpes Zoster". eMedicine. Sept 18, 2006.
3. Medline Plus. "Herpes Zoster". 5/26/2006.
4. McElveen W. "Postherpetic Neuralgia". eMedicine. Oct 2, 2006.