

## CASE REPORT

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# Shingles: Extensive Clinical Presentation of Herpes Zoster Infection

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### Abstract

**Shingles**, also known as **zoster**, **herpes zoster**, or **zona**, is a viral disease characterized by painful skin rash with blisters. Typically the rash occurs on either side of face in a single stripe. Two to four days before the rash occurs there may be pain or tingling in the area. The rash usually heals within two to four weeks. Ongoing nerve pain may last for months or years, condition called postherpetic neuralgia. In those with poor immune function the rash may occur widely. If the rash involves the eye, vision loss may occur. Shingles is due to a reactivation of varicella zoster virus (VZV) within body. Chickenpox is due to an initial infection with VZV. Once chickenpox has resolved, the virus may remain inactive in nerve cells. Risk factors for reactivation include older age, poor immune function, and having had chickenpox before 18 months of age. Diagnosis is typically based on signs and symptoms. The shingles vaccine decreases the chance of shingles by about half in those between the ages of 50 and 80. It also decreases rates of postherpetic neuralgia. Antiviral medications such as aciclovir can reduce the severity and duration of disease if started within 72 hours of the appearance of the rash. NSAIDs or opioids may be used to help with the acute pain. It is estimated that about a third of people develop shingles at some point in their life. children may also get the disease. The number of new cases per year ranges from 1.2–3.4 per 1,000.

### Epidemiology

Varicella zoster virus (VZV) has a high level of infectivity and has a worldwide prevalence. zoster can only occur in someone who has previously had chickenpox (varicella). Shingles has no relationship to season and does not occur in epidemics. There is, however, a

strong relationship with increasing age. The incidence rate of shingles ranges from 1.2 to 3.4 per 1,000 person years among younger healthy individuals, Relationship with age has been demonstrated, and is attributed to the fact that cellular immunity declines as people grow older.<sup>1</sup> Another important risk factor is *immunosuppression*, as in people with HIV. Other risk factors include *psychological stress* Other potential risk factors include *mechanical trauma and exposure to immunotoxins*. Adults with latent VZV infection who are exposed intermittently to children with chickenpox receive an immune boost.<sup>4</sup>

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### Pathophysiology

Postherpetic neuralgia occur due to nerve damage .The causative agent for shingles is the varicella zoster virus (VZV)—a double-stranded DNA virus. The immune system eventually eliminates the virus from most locations, but it remains dormant in dorsal root ganglion or the trigeminal ganglion. Shingles occurs only in people who have been previously infected with VZV; although it can occur at any age & in those aged 50 years or older.<sup>[16]</sup> Repeated attacks of shingles are rare. shingles is more likely to occur in people whose immune systems are impaired due to aging, immunosuppressive therapy, psychological stress, or other factors. <sup>[17]</sup>

### Case report

A 50 years old lady presented to ENT dept. in Bangladesh Medical College with complaints of fever for last 5days , facial and orbital swelling that eventually become blister formation on right side of face <sup>3</sup> and rapidly enlarging. He also complaints for severe pain along distribution of trigeminal nerve for 5 days. On examination there is large swelling involving right side of face and periorbital region almost closing right eye. There is large blister formation that impedes to rupture. patient having high fever upto 105 F. After admission strong analgesic and anti viral and neural suppressant gabapentine in oral form given to patient. fever and pain reduced rapidly and blister start to subside within 3dayes of prescribing antiviral



**Fig.-1:** Trigeminal Shingles along the distribution of trigeminal nerve.

oral acyclovir 400mg 6hourly dose for 7days. Tremendous improvement of patient condition observed and patient discharged from hospital within 4days.



**Fig.-2:** Periorbital and facial and nasal swelling.



**Fig.-3:** Extensive lesion with large blister formation in Right cheek, nose and orbital swelling and uveitis & keratitis.



**Fig.-4:** Tremendous improvement after receiving anti viral drugs

## Discussion

The earliest symptoms of shingles, which include headache, fever, and malaise,<sup>[1][3]</sup> These followed by sensations of burning pain, itching, hyperesthesia (oversensitivity), or paresthesia (“pins and needles”: tingling, pricking, or numbness) and pain can be interspersed with quick stabs of agonizing pain. Shingles in children is often painless, but people are more likely to get shingles as they age, and the disease tends to be more severe.<sup>4</sup> In most cases after one to two days the initial phase is followed by the appearance of the characteristic skin rash. limited to a dermatome, normally resulting in a stripe or belt-like pattern that is limited to one side of the body and does not cross the midline. *Zoster sine herpette* (“zoster without herpes”) describes a person who has all of the symptoms of shingles except this characteristic rash.<sup>5</sup> Later the rash becomes vesicular, forming small blisters filled with a serous exudate. The painful vesicles eventually become cloudy or darkened as they fill with blood, and crust over within seven to ten days; usually the crusts fall off and the skin heals. The trigeminal nerve is the most commonly involved nerve.<sup>6</sup> The ophthalmic division of the trigeminal nerve is most commonly involved branch. When the virus is reactivated in this nerve branch it is termed *zoster ophthalmicus* symptoms may include conjunctivitis, keratitis, uveitis, and optic nerve palsies that can sometimes cause chronic ocular inflammation, loss of vision, and debilitating pain.<sup>7,8</sup> **Shingles oticus**, also known as Ramsay Hunt syndrome type II, involves the ear. It is thought to result from the virus spreading from the facial nerve to the vestibulocochlear nerve. Symptoms include hearing loss and vertigo (rotational dizziness).<sup>9</sup> Shingles may occur in the mouth if the maxillary or mandibular division is affected, in which the rash may appear on the mucous membrane of the palate, gums

of the upper teeth) or the lower jaw (tongue or gums of the lower teeth) respectively. Oral involvement may occur alone or in combination with a rash on the skin over the cutaneous distribution of the same trigeminal branch.<sup>10</sup> As with shingles of the skin, the lesions tend to only involve one side, distinguishing it from other oral blistering conditions. In the mouth, shingles appears initially as 1–4 mm opaque blisters (vesicles), which break down quickly to leave ulcers that heal within 10–14 days. Due to the close relationship of blood vessels to nerves, the virus can easily spread to involve the blood vessels and compromise the blood supply, sometimes causing ischemic necrosis.<sup>10</sup>

## Prognosis

The rash and pain usually subside within three to five weeks, but about one in five develop postherpetic neuralgia. shingles can reactivate presenting as *zoster sine herpette*: pain radiating along a single spinal nerve (a *dermatomal distribution*), but without an accompanying rash. This condition may involve complications, causes cranial neuropathies, polyneuritis, myelitis, or aseptic meningitis, facial paralysis (usually temporary), ear damage, or encephalitis. During pregnancy, first infections with VZV may lead to infection but chronic infection or reactivation are not associated with fetal infection.

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