CASE REPORT

HERPES ZOSTER: A CASE REPORT

Dr. Prachi Chhimwal1*, Dr. Himanshu Shrivastava2, Dr. Rashmi Bhavasar3

*Corresponding Author Email: prachichhimwal@yahoo.com

Contributors:
1, 2, 3 Dept. Oral & Maxillofacial Pathology, K. M Shah Dental College & Hospital, Vadodara

ABSTRACT

Herpes zoster (HZ) (shingles) is a sporadic disease which results due to reactivation of the latent Varicella-zoster virus that is present because of a previous exposure to varicella infection (chickenpox). C3, T5, L1, L2, and 1st division of the trigeminal nerve are the most commonly affected nerves; the involvement of 2nd and 3rd division of trigeminal nerve is a rarity. The condition is marked by the manifestation of multiple, painful, unilateral vesicles, and ulcerations which show a typical single dermatome involvement. The elderly and those with an immune-compromised status such as HIV/AIDS stand a greater risk to develop HZ. In this case report, we present a 42-year-old male patient with HZ involving the maxillary division of the trigeminal nerve. The involvement of mandibular and maxillary branches without the ophthalmic branch involvement is relatively uncommon and accounts for only 1.7% of the total cases of HZ. The purpose of this article was to review the literature and report a case along the discussion.

INTRODUCTION:

Herpes zoster (HZ) is a well-known viral disease that usually presents as a painful unilateral vesicular rash restricted to the distribution of a sensory nerve. HZ which is also known as Shingles, is an acute infection of viral origin resulting from the reactivation of the DNA virus varicella zoster, which causes chickenpox. It commonly manifests as vesicular rash, which are painful and runs its progression in a matter of 4-5 weeks. The pain may persist for months or even years after healing of the skin lesions. This phenomenon is called as postherpetic neuralgia (PHN). The risk of PHN in patients with zoster is approximately 10-18%. Nearly, 3% of patients with zoster are hospitalized. Morbidity due to zoster is common among immunocompromised patients. HZ can affect any of three branches of the trigeminal nerve. The involvement of mandibular and maxillary branches without the ophthalmic branch involvement is relatively rare and accounts for only 1.7% of the total cases of HZ. Oral manifestations of HZ appear when the second and third divisions of the trigeminal nerve are affected. Dental and osseous manifestations such as non-vital teeth, internal resorption of teeth, abnormal development of permanent teeth, spontaneous exfoliation of teeth, and necrosis of maxilla and mandible have been reported. The purpose of this article is to report one such case along the discussion.

Case Report

A male patient of 42 years reported to our department (Department of oral and maxillofacial pathology, K. M Shah Dental College and Hospital, Vadodara) complaining of painful ulcers in the mouth since 3 days. The patient presented with the history of pain which was mild, continuous, and radiating in nature, and was associated with fever of low grade since 5 days. After 2 days patient developed fluid-filled blisters distributed over the left half of the face. The patient was not able to eat food since 3 days. The patient gave a history of chickenpox infection in childhood. No relevant drug, dental, and family history was recorded.

On general physical examination, the patient was of normally built and no abnormality was detected in the nails, gait, upper, and lower limbs. Clinical signs of icterus, pallor, clubbing, edema, cyanosis, and lymphadenopathy were absent. On evaluation of vital signs, temperature was noted to be 100°F and blood pressure 140/80 mm of Hg. On extraoral examination, no abnormality was detected in the eyes, nose, and temporomandibular joint. Clusters of vesicles (Figure 1) were present on the left half of face involving ala of the nose and upper lip. On intraoral examination, multiple ulcers were seen on left half of hard palate and soft palate (Figure 2). The shape of the ulcers was irregular, measured approximately 3 mm × 4 mm in size. Margins of the ulcer were erythematous and edges were sloped.
Correlating the case history, clinical findings, and cytological examination, a final diagnosis of HZ was given. Aceclofenac 500 mg thrice daily was prescribed for symptomatic relief of pain. Betadine mouthwash was also advised to improve oral hygiene. Antiviral drug therapy was started with acyclovir 800 mg 5 times per day for 10 days. On examination of the patient after 2 weeks, regression of a number of extraoral (Figure 3) and intraoral (Figure 4) lesions were noted with the formation of scar tissue and hypopigmented areas. No fresh vesicles were reported. The patient was then reviewed after 1-week and tremendous improvement was noticed regarding the HZ lesions. After 1-month follow-up, the patient was totally devoid of symptoms. The lesions healed with scarring, but post-therapeutic complications were not reported.

**Discussion**

Varicella-zoster virus (VZV) like other herpes viruses causes both primary and recurrent infections and remains latent neurons present in the sensory ganglia. VZV is associated with two major clinical infections of humans: Chickenpox (varicella) and shingles (HZ). Chickenpox is a primary infection that occurs the first time an individual is affected by the virus with generalized manifestations. After the primary disease heals, VZV remains latent in the dorsal root ganglia of spinal nerves or extramedullary ganglia of cranial nerves. A person without any prior contact with VZV can develop chickenpox after coming in contact with an individual with HZ. Patient complained of mild pain. Hence, HZ disease patients can have mild to severe pain during active stage of the disease. Patients with HZ may progress through three stages; 1. Prodromal 2. Active 3. Chronic

The prodromal stage is characterized by sensations such as burning, tingling, itching, pricking, occurring along the cutaneous distribution of dermatome. Odontalgia and pulpal necrosis may result if branches of the trigeminal nerve are involved, during this phase. These symptoms may be present up to 1-month in advance of the acute mucocutaneous lesions, and hence, this stage is difficult to diagnose. The active stage is described by the appearance of the rash with along with the systemic upset. The skin rash is very
characteristic and progresses from erythematous papules, edema to vesicles, and finally to pustules within 1-7 days. Later, these pustules dry, crust, and are exfoliated over the next 2-3 weeks leaving erythematous macular lesions that may scar\(^9\). In this case, patient came during the active stage of disease with the characteristic unilateral presentation of lesions in the left half of face and palate. The active or “eruptive” phase of HZ is most contagious and can pose a significant risk of cross infection\(^9\).

Approximately 10% of all patients advances to the chronic stage of HZ, and is known as PHN which is defined as a short-lived, deep, shooting, and recurrent pain remaining for over a month or 3 months after the healing of the mucocutaneous lesions\(^7\). Risk of occurrence of PHN increases significantly after sixth decade, which may be because of decline of cell-mediated immunity\(^11\).

Root resorption, tooth exfoliation, periapical lesions, and osteonecrosis of the alveolar bone have also been reported in association with HZ infection. James Ramsay Hunt’s syndrome may result, if geniculate ganglion is involved which manifests as vesicular eruptions of external auditory meatus and pinna of ear associated with pain and facial paralysis\(^8\). Lesions affecting ophthalmic nerve usually involve conjunctiva, upper eyelid, lacrimal glands, forehead, scalp, and lower half and root of the nose. It may also lead to blindness secondary to scarring of cornea, which is known as HZ ophthalmicus\(^2\). In majority of the HZ patients, the condition is self-limiting, and healing is usually complete. However, the management is indicated as follows:

• To alleviate the symptoms of pain and malaise
• To restrict the spread as well as duration of the skin lesions and
• To prevent the development of PHN and ophthalmological complications.

Diagnosis at an early stage of the disease and prompt treatment in the prodromal phase by the antiviral drugs usage should be the mainstay of its management\(^11\).

In this case, we advised the patient to be in isolation, so as to prevent the viral transmission to the healthy individuals. The cutaneous lesions were kept clean and dry to reduce the risk of superinfection with bacteria. Drug therapy was started with analgesics and antiviral agents viz. acyclovir 800 mg 5 times daily for 10 days, post 2 weeks of which the patient showed significant improvement.

Conclusion

HZ of the trigeminal nerve is one such disease that falls within the diagnostic purview of all dentists. In conclusion, a case of HZ affecting the maxillary branch of the trigeminal nerve is reported. This case signifies the importance of a thorough medical and dental case history and examination of the patients with sporadic diseases such as HZ. Early diagnosis and prompt treatment by antiviral drugs in the prodromal stage of the HZ may aid in reducing the duration and the severity of pain of HZ infection and also prevent the complications.

REFERENCES