

A case report of Herpes Zoster: a zone creeping disease



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Abstract

Herpes zoster (shingles) of the trigeminal nerve is one of the rare presentation which is increasing more commonly with the age of an individual. The disease is under the diagnostic purview of the dental specialist. The likelihood of its occurrence and severity of this illness demands the thorough knowledge of the etiopathogenesis and its correlation with the clinical presentation. A detailed differential diagnosis and treatment modalities will help the dental practitioner to identify and manage the disease and prevent the further complications. Hereby reporting a 60 year old male patient who presented with chief complaint of sudden eruptions of vesicle on unilateral half of the face with an intraoral presentation.

Key words

Antivirals, dermatomal rash, Herpes Zoster, post herpetic neuralgia, Shingles.



Background

Varicella zoster virus is an alphaherpesviridae virus. It derives its name from the two distinct disease varicella (chicken pox) and herpes zoster. Chicken pox is a primary infection of the virus which is highly contagious and often presenting with acute symptoms in children. Herpes zoster/shingles is a reactivated form of the primary lesion which is caused with the decline of the cell mediated immunity. The word derives its meaning from the Greek herpein, "spread or creep" and zoster, "girdle or zone". The zone refers to the dermatomal distribution pattern seen in the disease [1, 2]. It is a rare disease with an incidence of 1.2 to 3.4 cases per 1,000 person/year in immunocompetent individuals of the community [3]. The following case presents in a 60 year old patient whose dermatomal distribution is in the cranial region (15%) with an involvement of ophthalmic, maxillary zone and having intraoral manifestations.

Case Report

A 60 -year old male patient presented with chief complaint of sudden onset of rash, swelling on the left half of the face with numerous fluid filled eruptions followed by intake of antipyretic medication for fever past one day.

Patient gives history of chicken pox in the childhood with family and personal history being non contributory. Extra oral examination on inspection revealed a diffuse swelling seen on the left half of the face extending superiorly from infraorbital region and inferiorly to commissure of the oral cavity causing drooping of the lip line. It also extends anteriorly from the left ala of the nose with obliteration of the nasolabial fold and posteriorly to the zygomatic bone. The surface of the swelling presented with unilateral rash (red in appearance) with overlying numerous small fluid filled vesicles in the form of clusters. The rash and the eruptions were limited to the ophthalmic and maxillary distribution zone of the trigeminal nerve and seen extending to the tip of the nose(not crossing the midline) and left commissure of the mouth [Figure 1.A, 1.B]. Lymph node examination revealed left single submandibular lymph nodes which on palpable was mobile, tender and around one cm in diameter and not fixed to the underlying structures. Intra oral examination revealed erythematous of the left buccal mucosa [Figure 1.C]. Hard tissue examination showed generalized recession and mobility with numerous root stumps with tender on percussion of left maxillary second premolar.

Based on the history, examination and clinical findings a diagnosis of Herpes zoster of the left side of the face involving trigeminal nerve (ophthalmic and maxillary

division) and Acute periapical abscess of left maxillary second premolar was given.

An intraoral radiograph for the involved tooth was advised which confirmed the diagnosis for an abscess. The patient was further kept on treatment with systemic antiviral (Tablet Acyclovir 800 mg five times daily for seven days), Systemic antibiotic (Tablet Cefadroxil 500 mg twice daily for five days), and systemic analgesic Tablet (Diclomol twice daily for three days). The patient reported for three visits pustular (third day), ulcerate with crustation (seventh day) and scarring (after tenth day) [Figure 1.D].



Figure 1.A Pre treatment



Figure 1.B Pre treatment



Figure 1.C. Pre treatment



Figure 1.D. Post treatment

Figure - 1 : Clinical picture and course of the disease.

The study was conducted in Saraswati Dental College and Hospital, Tiwariganj, Faizabad Road, Chinhat, Lucknow-227105, India.



Discussion:

Herpes zoster is a localized, usually painful, blistering skin rash caused by varicella-zoster virus (VZV). It causes primary infection varicella (chickenpox) and reactivated form Shingles (Zoster). Chicken pox is an acute, highly contagious illness. It presents commonly in children. With the resolution of the self limiting illness in them, the virus translocates itself from the terminal sensory nerve endings to the dorsal root ganglion. Residing in the ganglion the virus gets reactivated with the decline of the cell mediated immunity resulting in herpes zoster (Shingles) [1]. The risk factors for the reactivation is prior exposure, age >50 years, immunocompromised state, psychological stress and trauma [4].

Epidemiology

However age and prior exposure is a risk factor for this case. Herpes zoster characteristically features as a unilateral vesicular rash with its distribution commonly limited to 1 to 3 adjacent dermatomes [5]. Ophthalmic (V1) and midthoracic to upper lumbar (T3-L2) dermatomes have a high predilection. In this case the lesion was limited to the ophthalmic and maxillary dermatome.

Clinical features

Herpes zoster presents initially with intense pain in the involved dermatome which varies in wide quality range from being intermittent or continuous, throbbing, sharp, stabbing, shooting or burning. Prodromal phase is seen in 80% of the patients affected by herpes zoster which last for three to five days. They present with fatigue, mild fevers and abnormal skin sensations including dysesthesia, tingling or itching. The prodromal phase is soon followed by skin manifestations [6]. Rash is a common skin manifestation which aids in the clinical diagnosis of the case. However, conditions such as Herpes simplex infection, eczema herpeticum, impetigo, contact dermatitis and others can be mistaken for shingles. Laboratory confirmation can be obtained by taking a sample from the base of the skin lesions and performing a nucleic acid detection test (such as PCR) or direct-fluorescent antibody test (DFA). Other techniques like viral culture are less sensitive and take longer to complete [7].

Complications

The most common complication of shingles is persistent chronic neuropathic pain known as post-herpetic neuralgia (PHN) which is a true chronic neuropathic pain, persists beyond 90-120 days from the onset of rash [8]. Other complications being: skin pigmentation and scarring, secondary bacterial infection, herpes zoster ophthalmicus (10-20%), cutaneous hypersensitivity or allodynia (in 5-10%), neurological complications (commonly nerve palsies), pneumonia, meningitis. However in this case only

pigmentation and scarring was noted as a complication [4, 9].

Management

The treatment aims to accelerate the healing of the rash, reduce the duration and severity of pain, and decrease risk of complications [3]. Immunocompromised patients or those patients in which new lesion form should be started with antiviral therapy within 72 hours or just after the time [7,9]. In a normal adult a 7-10 day course of acyclovir (ZoviraxTM) 800 mg PO five times per day, Valacyclovir (ValtrexTM) 1000 mg PO TID and famciclovir (FamvirTM) 500 mg PO TID is the mainstay of the treatment. In spite of starting the treatment as soon as possible, post herpetic neuralgia becomes a complication in 20% of elderly over 50 years of age. The neuralgia presents as a persistent neuropathy after 6 months. The addition of steroids has not proven to prevent neuralgia, but should be considered to reduce the duration of acute symptoms. The control of pain is also a significant aspect which can be brought about by capsaicin ointment (ZostrixTM), tricyclic antidepressants, gabapentin (NeurontinTM), topical lidocaine, narcotics, and regional nerve blocks. Varicella vaccine is a live, attenuated vaccine which is contraindicated during pregnancy and HIV-infected individuals but recommended for health care workers, those with close contact to immunocompromised individuals, young children, and to be pregnant women [10].

Conclusion

The occurrence of Herpes zoster is increasing significantly with more ageing of the population. The disease occurs with onset of prodromal symptoms which can be a marker for the diagnosis or differential diagnosis of the same. Therefore an early management with the antivirals and analgesic reduces the post complication. Advancements in vaccination is a preventive measure rather than cure of the disease or its complication.

Competing interests

Authors do not have any competing interest.

Authors' contribution

Anand P reported, and studied the case thoroughly; drafted the manuscript, and revised it. Raju MS, Prasad LK and Kumar D critically revised the manuscript. Final manuscript was approved by all authors.

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