**Case Reports**

**Herpes Zoster with Dissemination**

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Herpes zoster or shingles is an acute vesicobullous cutaneous infection characterized by dermatomal distribution, predominantly in adults. Extensive cutaneous dissemination has been reported in immunocompromised patients. However, its existence is documented in immunocompetent individuals as well. We report two children with disseminated herpes zoster, one of whom was immunocompromised secondary to severe malnutrition and had associated orbital septal cellulitis.

**Key words:** Acyclovir, Herpes zoster.

Herpes Zoster (HZ) is caused by varicella-zoster virus (VZV) due to reactivation of the virus from dorsal root or cranial nerve ganglia. This occurs in up to 15% individuals following varicella, less frequently in children than adults. The latent period varies from several weeks to years (1). Varicella during infancy is reported to be a risk factor for childhood zoster (1). Human immunodeficiency virus infection, chronic infections, primary immunodeficiency syndrome and immunosuppressive therapy are important causes of disseminated herpes zoster (2).

We report 2 cases of childhood herpes zoster with dissemination which is an uncommon presentation.

**Case Report 1**

A 6-year-old boy presented with eruption of blisters around left eye associated with fever of one-week duration. Two days later, the patient developed numerous lesions distributed over the trunk and few scattered lesions over both arms. The ocular lesions were associated with watering, pain, photophobia and blurring of vision in the left eye. The child had a positive personal and family history of atopy.

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Cutaneous examination revealed multiple vesicles and pustules on an erythematous base present over the left upper eyelid and forehead with few interspersed brownish, mildly adherent crusts (Fig. 1). Examination of the left eye revealed swollen, erythematous tender eyelids, chemosed palpebral conjunctiva and nebular opacity over the lower temporal cornea with restricted eyeball movement and...
Other hematological investigations, cultures and X-ray chest were within normal limits.

The patient was diagnosed to have disseminated herpes zoster with herpes zoster ophthalmicus of the left eye and was treated with oral acyclovir 400 mg 5 times a day along with intravenous ceftriaxone, amikacin and cloxacillin for 2 weeks followed by oral cloxacillin for another 2 weeks. NSAIDS and steroid-antibiotic eye drops were also administered, in addition to the supportive nutritional supplements.

The lesions healed completely and the ocular inflammation resolved in 4 weeks.

**Case Report 2**

An 11-year-old boy presented with fever and multiple, painful fluid filled lesions, of 3 days duration. Cutaneous examination revealed grouped vesicobullous lesion on erythematous base present along left third and fourth thoracic segment and numerous discrete lesions scattered mainly over the trunk, with few scattered ones on both arms and thighs as well. Few of these lesions were crusted with blackish, adherent crust and underlying erosions with healthy granulation tissue at the floor (*Fig. 2*). The child weighed 33 kg and height was 130 cm. There was past history of chickenpox about 5 years back, which resolved spontaneously in 3 weeks. There was no history of high risk behavior with reference to the acquisition of HIV or history of recurrent infections. History of atopy was elicited in the patient.

Tzanck smear from vesicular lesions present around the eye and trunk revealed multinucleate giant cells suggestive of varicella zoster infection. Serology for HIV and syphilis was nonreactive. Hemogram revealed microcytic hypochromic anemia (hemoglobin 8.5 g/dL) along with polymorphonuclear leukocytosis and no atypical lymphocytes. Total serum protein was 5.2 g/dL with albumin/globulin ratio of 1.8/3.2. Mantoux test was negative at 48 hours.
where the prevalence is highest in individuals above 50 years of age. They also reported a single case of disseminated zoster who was HIV positive.

Herpes zoster in prepubertal children usually follows a benign clinical course with most of the lesions resolving spontaneously in 10 to 14 days. Systemic reactions such as fever, headache and regional lymphadenopathy are more common in childhood. Hemorrhagic lesions; secondary bacterial infections, superficial skin necrosis and anesthesia of the involved dermatome are among the dermatological complications. Postherpetic neuralgia and involvement of 2-3 contiguous dermatomes may be occasionally seen in adolescents.

Herpes zoster is usually associated with transient viremia caused by hematogenous spread of virus from the infected ganglion. Although this viremia is immediately curbed in an immunocompetent individual, some of the virus may still reach the skin through this route, to give rise to few disseminated vesicles (lesions <25) away from the dermatomes affected by herpes zoster. In these patients, lesions begin along a dermatome, but, by third or fourth day, a few widely scattered vesicles begin at distant skin sites remote from the original dermatome. The term herpes zoster with aberrant vesicles’ has been used to describe this situation, and the natural history and course of herpes in this group is not different from those with the illness limited to the affected dermatomes. However, Takayama, et al. reviewed 92 children with herpes zoster and found that the infection was not as mild as is generally accepted.

Disseminated herpes zoster, quite often confused with herpes zoster with aberrant vesicles, is in fact the result of a similar viremia, which instead tends to be persistent.
usually because of some underlying immuno-suppression. Disseminated zoster leads to a generalized vesicular eruption (lesions >25) akin to varicella(5). A patient with generalized zoster deserves a complete search for underlying malignancy or immunodeficiency(3).

Herpes zoster with aberrant vesicles may be observed in 17 to 35% of immunocompetent patients with herpes zoster, whereas disseminated HZ occurs in 2 to 10% of immunocompromised zoster patients(5). Presence of an occult underlying disease, malignancy, immunodeficiency or immunosuppressive therapy is amongst the well-known causes of disseminated herpes zoster(2). Malnutrition may cause immunosuppression with increased susceptibility to infections, as it has a profound effect on cell mediated immunity, antibody production and non-specific immune responses(7). In the first patient, development of widely disseminated disease was probably due to immunosuppression, which under aforesaid circumstances may be attributed to severe malnutrition. In the second case however, patient had disseminated herpes zoster, without any documented immunodeficiency state. This has been reported infrequently in adults, and even more infrequently in the pediatric age group(6,8).

Early treatment with oral acyclovir, 10-20 mg/kg, 4-5 times a day for 7 days decreases viral shedding, reduces the rate of new lesion formation, shortens the duration of fever and improves the rate of healing by 1-2 days(9). It is of special significance in ophthalmic herpes zoster so as to prevent serious ocular complications. Both the patients responded adequately to oral acyclovir without any dermatological or systemic sequelae.

REFERENCES