

Case Report

Herpes zoster in the radial nerve distribution in an 8 years old healthy child-a case report

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Received: 23 December 2016

Accepted: 28 January 2017

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ABSTRACT

Varicella zoster is an omnipresent virus which commonly affects childhood as chicken pox. Although the primary infection is self-limiting and seldom severe, the virus remains dormant in the body. The virus resides in the dorsal root or cranial nerve ganglion and reactivation may occur years later as herpes zoster or "Shingles". Herpes zoster (HZ) can occur at any age but is rare in childhood and adolescents. Old aged and immunosuppressed subjects are at risk for developing the disease. The most common area involved in HZ is the trunk (dermatomes innervated by the thoracic nerves) and rarely presents exclusively in the upper extremity. We report a case of HZ isolated to the radial nerve distribution in a healthy 8 years boy. The reported case reveals the importance of considering zoster infection in young age, or uncommon sites when evaluating the onset of pain in a dermatomal distribution specially if associated with vesiculobullous rash.

Keywords: Herpes zoster, Radial nerve, Shingles

INTRODUCTION

Herpes zoster (HZ) or shingles is an acute vesiculobullous cutaneous infection in dermatomal distribution, commonly in adults and older subjects. It is caused by reactivation of dormant *Varicella-zoster` virus`* that resides in a dorsal root or cranial nerve ganglion.¹

Risk factors for developing Herpes zoster include old age, decreased immunity and hematologic malignancy documented by population-based, systematic review and retrospective cohort studies.²⁻⁵ Herpes zoster in children is rare and more frequently seen in immunocompromized ones.

HZ has been reported in ulnar nerve dermatome in an adult case and to our knowledge; there is no single report of radial nerve zoster reactivation in healthy children.⁶⁻⁷ We present a rare case of isolated radial nerve zoster reactivation in a healthy 8 years boy.

CASE REPORT

An 8 -year- old boy presented with a 5 day history of pain and blisters along the radial aspect of his left arm, forearm and hand. His past medical history was not significant, apart from chicken pox 3 years ago, and no history of trauma or chronic illness. On examination, there were clustered vesicles and some pustules surrounded by erythema in the left radial nerve distribution (Figure 1).

There were mildly enlarged axillary lymph nodes at the affected side. A clinical diagnosis of herpes zoster was made and intravenous acyclovir 15mg/ kg five times per day was administered for 7 days. In addition to that, topical antibiotic was initiated for two weeks to avoid secondary bacterial infection. Ten days after starting medications, the eruption had almost healed (Figure 2).



Figure 1: The vesiculobullous eruption with pustules on the left radial nerve distribution at the time of presentation.

However, the boy still complained of mild pain and numbness over the sites involved by herpes zoster. By one month the neurological symptoms have been resolved.



Figure 2: Herpes zoster lesions 10 days after treatment.

DISCUSSION

Herpes zoster (HZ) can be seen at any age. However, zoster in children is uncommon.⁶ Certainly the immunosuppressed children are at risk, especially from lymphoproliferative disorders, chemotherapy or immunosuppressive drugs such as corticosteroids and biologic drugs.⁷⁻⁸ HZ most commonly affects the nerves between T3 and L3. HZ eruptions have been reported on upper extremity including ulnar nerve distribution, and thumb, but to our knowledge, this is the first case reporting HZ involving the radial nerve distributions.⁹⁻¹⁰

Complications may be dermatological, neurological, ophthalmological or visceral.¹¹ The most common dermatological complication of varicella is bacterial superinfection of skin lesions, caused most often by staphylococcus aureus or streptococcus pyogenes.¹²⁻¹³ Bacterial cellulitis can accentuate the scarring associated with varicella and can be minimized by keeping the

patient's fingernails trimmed and by using antibacterial soaps and prophylactic antibiotics. Antiviral drugs including acyclovir, valacyclovir, famciclovir have been approved for the treatment of herpes zoster.¹ These drugs inhibit the replication of the varicella zoster virus, resulting in decreased viral shedding, accelerated healing of the lesions and decreased duration and severity of pain.¹¹

CONCLUSION

Herpes zoster is infrequent in children, but can occur even in uncommon sites as in the upper extremities. Dermatologists and general practitioners should be aware that shingles can occur in immuno-competent children and may involve any site in the body. Nevertheless, early diagnosis and treatment of shingles should be taken in children to avoid the complications of the disease.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

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Cite this article as: Edris H, Abualiat A, Al- Mordy A. Herpes zoster in the radial nerve distribution in an 8 years old healthy child-a case report. *Int J Res Med Sci* 2017;5:1123-5.