

HERPES ZOSTER WITH PENOSCROTAL SWELLING: A RARE COMPLICATION IN A HEALTHY CHILD

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Abstract

Herpes zoster is characterized by vesicular eruptions over a specific dermatome caused by reactivation of varicella zoster virus in dorsal root ganglion during an immunocompromised state. Rarely, it can be multidermatomal in distribution. Usually an affliction of elderly, it is rarely seen in otherwise healthy children also and the complications are even rarer in children. Here we describe a case of a 10-year-old healthy male patient with herpes zoster affecting the left S2-S3 dermatomes along with penoscrotal swelling as its complication. This case is being reported for the one of its kind of complication of herpes zoster.

Key words: Herpes Zoster, Children, Penoscrotal swelling, complication

Introduction

Herpes zoster is a disease characterized by vesicular eruptions caused by human herpes virus 3; varicella zoster virus (VZV). First episode by VZV causes chickenpox and it becomes latent in the dorsal root ganglion. The reactivation of this virus causes herpes zoster usually over a specific dermatome but in special scenarios, it can be multidermatomal in distribution. Herpes zoster is usually a disease of elderly when there is frequent immunosuppression due to comorbid diseases. It is considered to be rare in children, though the incidence seems to be increasing. Complications are even rarer in children. Here we describe a case of a 10-year-old male child with crusts on left side of penis, scrotum along with significant penoscrotal swelling along with crusted lesions on left buttock and thigh. We report this case for a rare complication of herpes zoster seen in a healthy child.

Clinical Case

A 10-year-old male child presented to our OPD with complaints of swelling and pain over penis and scrotum associated with raw areas over left side of penis, scrotum and buttock extending to the thigh for 7 days. On probing, the parents gave history of vesicles over the same sites 10 days back for which they had consulted some nearby doctor. There was a history of difficulty in micturition because of pain but there was no complain of discharge per urethra. There was no history of immunization with varicella vaccine or history of chickenpox in childhood. There was no history of recent contact with any chickenpox or herpes zoster patient. On examination, there were few tiny discrete vesicles on an erythematous base on left side of penis and scrotum along with diffuse swelling over penis and scrotum, imparting a ram's horn penis appearance (Figure 1a). There were erosions over left side of penis and scrotum covered with hemorrhagic crusts and they did not cross the midline (Figure 1 a). There were multiple discrete to grouped erosions covered with crusts and two ulcers (2.5x2 cm over left buttock; 2x1.5 cm over lumbosacral area) present over left lumbosacral area, buttock extending up to upper thigh (S2-S3 dermatome) [Figure 1b].



Figure 1 : (a) Crusted lesions over penis and scrotum with swelling of penis (Ram's horn penis appearance) and scrotum, (b) Multiple discrete to grouped erosions covered with crusts and two ulcers (2.5x2 cm over left buttock; 2x1.5 cm over lumbosacral area) present over left lumbosacral area, buttock extending up to upper thigh (S2-S3 dermatome).

The child was admitted, and investigations were done. A paediatrician's opinion was sought to rule out any systemic illness or cause of immunosuppression. Routine investigations including complete hemogram, liver function and renal function



Figure 2 : (a) Decrease in the swelling and healing erosions on left side of penis and scrotum with reappearance of scrotal rugosities, (b) Healing lesions with superficial erosion on left buttock and left thigh.

tests were normal. Serum HIV was non-reactive. The patient was started on oral acyclovir (20mg/kg/ dose, 5 times a day), empirical oral antibiotics and analgesics which were given for 7 days. Regular cleaning of the ulcers with normal saline followed by scrotal dressing and bandaging was done for 7 days. General advice regarding increased water intake and avoidance of unnecessary movements were given. The lesions started improving from the third day of treatment. By fifth day, the swelling over penis and scrotum had decreased significantly with reappearance of scrotal rugosities (Figure 2 a). Erosions were revealed at the sites of severe crusting and patient was advised to apply topical mupirocin ointment (Figure 2 b). At the end of 7 days, lesions had improved significantly, and the patient was discharged with the advice of continuing topical antibiotic.

Discussion

Herpes zoster is a viral infection caused by human herpes virus 3 also known as varicella zoster virus. Primary infection occurs in the childhood and is known as chickenpox, which is characterized by multiple well-defined discrete fluid filled vesicles on erythematous base all over the body. The virus becomes latent in the dorsal root ganglion and during the state of immunosuppression, it travels through the nerves to skin and causes vesicular eruptions on skin over a single dermatome, known as herpes zoster or shingles.

Rate of incidence of herpes zoster is 3.40 cases per 1000 persons; in children <10 years, it is 0.74/1000.^[1] However, it is seen that the incidence of herpes zoster in children is on a rise. Earlier it was presumed that childhood herpes zoster was a marker of severe immunosuppression in children due to malignancy, especially acute lymphatic leukemia, but recent studies have refuted this hypothesis. Only about 3% of cases of malignancy were found to be associated with herpes zoster.^[2]

This rise in the incidence of herpes zoster in children may be due to primary varicella infection acquired in utero or postnatally when the immunity of the child is not fully developed.^[3] According to Terada et al, the immune status of the child at the time of acquiring varicella infection is the most important factor in determining childhood zoster. A decrease in lymphocytes and natural killer cells (NK cells) in childhood leads to reactivation of the virus.^[4]

The most common dermatomes involved are thoracic (50%) dermatomes while sacral dermatome was less involved.^[2,5] The common complications include secondary bacterial infections, corneal involvement in zoster ophthalmicus and Ramsay Hunt syndrome. Rare complications like meningoencephalitis, polyradiculitis, Guillain-Barre syndrome, disseminated zoster and pneumonia may occur in immunosuppressed individuals.^[6,7] Sacral involvement can lead to acute urinary retention due to detrusor areflexia.^[8] Post-herpetic neuralgia which is observed in the adults is not observed in the children.^[9] Though herpes zoster

can be diagnosed clinically, important differentials include bullous insect bite hypersensitivity reaction, zosteriform herpes simplex and bullous impetigo.^[3]

Treatment includes oral acyclovir 20mg/kg/dose five times a day for 5-7 days. Alternatives are valacyclovir and famciclovir which have good oral tolerability and greater efficacy.^[10] These drugs have been proven to reduce the severity and duration but unfortunately, they cannot prevent post herpetic neuralgia.^[11,12]

There are many case reports and series regarding the prevalence of herpes zoster in pediatric population, but only a few report the involvement of sacral dermatome. Complications of herpes zoster are rare in children and penoscrotal swelling occurring secondary to herpes zoster in children is still yet not described in the literature to the best of our knowledge. Hence, we describe a case of a young healthy child with herpes zoster involving left S2-S3 dermatome and penoscrotal swelling for the rarity of this complication.

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Reference

1. Jain A, Singal A, Baruah MC. Herpes zoster in a 9-month-old infant. *Indian J Dermatol Venereol Leprol* 1999;65:294-5.
2. Agarwal P, Mistry A, Patel N. Herpes Zoster in Children: A ClinicoEpidemiological Study Over 4 Years at a Tertiary Center In Gujarat. *Ntl J Community Med* 2016;7:536-39.
3. Prabhu S, Sripathi H, Gupta S, Prabhu M. Childhood herpes zoster: A clustering of ten cases. *Indian J Dermatol* 2009;54:62-4.
4. Terada K, Kawano S, Yoshihiro K, Morita T. Varicella-zoster virus (VZV) reactivation is related to the low response of VZV-specific immunity after chickenpox in infancy. *J Infect Dis* 1994;169:650-2.
5. Vora RV, Kota RK, Jivani NB. A clinicomorphological study of childhood herpes zoster at a rural based tertiary center, Gujarat, India. *Indian Journal of Paediatric Dermatology* 2016;17:273-6.
6. Grote V, Kries RV, Rosenfeld E, Belohradsky BH, Liese J. Immunocompetent children account for the majority of complications in childhood herpes zoster. *J Infect Dis* 2007;196:1455-8.
7. Sampathkumar P, Drage LA, Martin DP. Herpes zoster (shingles) and postherpetic neuralgia. *Mayo Clin Proc* 2009;84:274-80.
8. Acheson J, Mudd D. Acute urinary retention attributable to sacral herpes zoster. *Emerg Med J* 2004;21:752-3.
9. Katakam BK, Kiran G, Kumar U. A prospective study of herpes zoster in children. *Indian J Dermatol* 2016;61:534-9.
10. Tyring SK. Management of herpes zoster and postherpetic neuralgia. *J Am Acad Dermatol* 2007;57:S136-42.
11. Bader MS. Herpes zoster: diagnostic, therapeutic, and preventive approaches. *Postgrad Med* 2013;125:78-91.
12. Chen N, Li Q, Yang J, Zhou M, Zhou D, He L. Antiviral treatment for preventing postherpetic neuralgia. *Cochrane Database of Syst Rev* 2014;(2):CD006866.

