



Letter to the Editor

# Paediatric herpes zoster: Unmasking shingles in the young

Sharang Gupta<sup>1</sup>

<sup>1</sup>Department of Dermatology, Civil Hospital, Nabha, Punjab, India.

**\*Corresponding author:**

Sharang Gupta,  
Department of Dermatology,  
Civil Hospital, Nabha, Punjab,  
India.

drsharanggupta97@gmail.com

Received: 21 February 2025

Accepted: 06 March 2025

Epub Ahead of Print: 24 April 2025

Published:

**DOI**

10.25259/KPJ\_9\_2025

**Quick Response Code:**



Dear Editor,

Herpes zoster (HZ), commonly referred to as shingles, is a viral infection caused by the reactivation of the varicella-zoster virus (VZV). This virus, which causes varicella (chickenpox) during primary infection, remains latent in the dorsal root ganglia and can reactivate years later as HZ.<sup>[1]</sup> While HZ is typically associated with older adults and immunocompromised individuals, it can also occur in children, although at a lower frequency. The incidence of paediatric HZ has been significantly influenced by the widespread introduction of the varicella vaccine, altering its epidemiological trends.<sup>[2]</sup> Understanding the risk factors, clinical presentation, diagnostic modalities, treatment options and prevention strategies for paediatric HZ is crucial for improving disease management and minimising complications.

## EPIDEMIOLOGY

The incidence of HZ in children is relatively low, estimated at 74/100,000 person-years in unvaccinated children and 38/100,000 in vaccinated children.<sup>[1]</sup> The risk of paediatric HZ is higher in children who had varicella in infancy or were exposed to the virus *in utero*. While vaccination has significantly reduced primary varicella infections, breakthrough infections and subsequent HZ cases have been reported, although with a milder course.<sup>[2]</sup>

Several factors influence the risk of paediatric HZ, including:

**Age at primary infection:** Infants who contract varicella in the 1<sup>st</sup> year of life have an increased risk of developing HZ due to incomplete immune development and inadequate VZV-specific immunity.<sup>[3]</sup>

**Intrauterine exposure:** Maternal varicella during pregnancy can lead to congenital varicella syndrome or asymptomatic foetal infection, which may later manifest as HZ.<sup>[4]</sup>

**Immunocompromised status:** Children with malignancies (e.g., leukaemia, lymphoma), organ transplants, or those undergoing immunosuppressive therapy have an elevated risk of HZ due to impaired cellular immunity.<sup>[5]</sup>

**Varicella vaccination:** Although the vaccine reduces the incidence of varicella and HZ, vaccine-strain VZV can still reactivate, causing HZ in some individuals.<sup>[6]</sup>

## CLINICAL PRESENTATION

Paediatric HZ typically presents as a unilateral, vesicular rash distributed along a single dermatome. The rash is often preceded by prodromal symptoms such as localised pain, itching,

This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-Share Alike 4.0 License, which allows others to remix, transform, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

©2025 Published by Scientific Scholar on behalf of Karnataka Paediatric Journal

burning, or paraesthesia. The most commonly affected dermatomes include thoracic, cervical and trigeminal nerve distributions.<sup>[7]</sup>

### KEY CLINICAL FEATURES INCLUDE

**Prodrome:** Fever, malaise and localised pain or dysaesthesia preceding the rash by 1–3 days.

**Acute rash phase:** Clusters of vesicles on an erythematous base appearing along a dermatome. The vesicles rupture and crust over within 7–10 days.

**Resolution phase:** Complete healing occurs within 2–4 weeks, often leaving residual hypopigmentation or scarring.

### COMPLICATIONS

Although most cases of paediatric HZ resolve without significant morbidity, complications can arise, particularly in immunocompromised children.

**HZ Ophthalmicus (HZO):** Involvement of the ophthalmic division of the trigeminal nerve can result in conjunctivitis, keratitis, uveitis, or vision loss if untreated.<sup>[8]</sup>

**Neurological complications:** Meningitis, encephalitis, myelitis and Ramsay Hunt syndrome (involvement of the geniculate ganglion leading to facial paralysis and ear vesicles) have been reported in children with HZ.<sup>[9]</sup>

**Postherpetic neuralgia (PHN):** While rare in children, PHN can cause persistent neuropathic pain lasting months to years after the rash resolves.<sup>[10]</sup>

**Secondary bacterial infection:** Streptococcal or staphylococcal superinfection of the vesicular lesions may require antibiotic treatment.<sup>[11]</sup>

### DIAGNOSIS

The diagnosis of paediatric HZ is primarily clinical, based on the characteristic rash and dermatomal distribution. However, laboratory confirmation may be required in atypical or complicated cases.

### DIAGNOSTIC TOOLS INCLUDE

**Polymerase chain reaction:** The most sensitive and specific test for detecting VZV DNA from lesion samples.<sup>[12]</sup>

**Direct fluorescent antibody testing:** Rapid identification of VZV in lesion scrapings.

**Serology:** VZV immunoglobulin G and immunoglobulin M titres may be helpful in assessing immune status but are less useful for acute diagnosis.

### TREATMENT

The management of paediatric HZ focuses on symptom relief, antiviral therapy and prevention of complications.

**Antiviral therapy:** Early initiation of acyclovir (within 72 h of rash onset) can shorten disease duration and reduce complications. Alternative agents include valacyclovir and famciclovir, which offer improved bioavailability and reduced dosing frequency.<sup>[13]</sup>

**Analgesia:** Pain management includes acetaminophen, non-steroidal anti-inflammatory drugs or, in severe cases, opioid analgesics.<sup>[14]</sup>

**Topical care:** Calamine lotion, oatmeal baths and cool compresses help soothe pruritus and discomfort.

**Corticosteroids:** May be considered for severe cases involving neurological or ophthalmic complications under specialist guidance.<sup>[15]</sup>

### PREVENTION

The introduction of the varicella vaccine has significantly reduced the incidence of both varicella and subsequent HZ in children. The Advisory Committee on Immunization Practices recommends two doses of the varicella vaccine:

- First dose: 12–15 months
- Second dose: 4–6 years.<sup>[16]</sup>

While the vaccine does not eliminate the risk of HZ, vaccinated individuals who develop HZ generally experience a milder disease course with fewer complications.<sup>[17]</sup>

### CONCLUSION

Paediatric HZ remains an important clinical entity, particularly in children with a history of early varicella infection, immunosuppression or *in utero* exposure. While the disease is generally mild in healthy children, complications such as Herpes Zoster Ophthalmicus and neurological involvement necessitate early diagnosis and treatment. The varicella vaccine has played a crucial role in reducing the burden of both primary varicella and subsequent HZ, underscoring the importance of widespread immunisation. Continued research is needed to understand the long-term effects of vaccination on HZ epidemiology and optimise prevention strategies in paediatric populations.

**Ethical approval:** Institutional Review Board approval is not required.

**Declaration of patient consent:** Patient's consent is not required as there are no patients in this study.

**Financial support and sponsorship:** Nil.

**Conflicts of interest:** There are no conflicts of interest.

**Use of artificial intelligence (AI)-assisted technology for manuscript preparation:** The authors confirm that there was no

use of artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript and no images were manipulated using AI.

## REFERENCES

- Smith CG, Glaser DA. Herpes zoster in childhood: Case report and review of the literature. *Pediatr Dermatol* 1996;13:226-9.
- Peterson N, Goodman S, Peterson M, Peterson W. Herpes zoster in children. *Cutis* 2016;98:93-5.
- Feder HM Jr, Hoss DM. Herpes zoster in otherwise healthy children. *Pediatr Infect Dis J* 2004;23:451-7, quiz 458-60.
- Rodríguez-Fanjul X, Noguera A, Vicente A, González-Enseñat MA, Jiménez R, Fortuny C. Herpes zoster in healthy infants and toddlers after perinatal exposure to varicella-zoster virus: A case series and review of the literature. *Pediatr Infect Dis J* 2010;29:574-6.
- Katakam BK, Kiran G, Kumar U. A prospective study of herpes zoster in children. *Indian J Dermatol* 2016;61:534-9.
- Gupta S, Malhan S, Chopra D. Paediatric herpes zoster: A report of seventeen cases from a tertiary care hospital of North India. *Trop Doct* 2025;13:494755241312463.
- Liesegang TJ. Herpes zoster ophthalmicus natural history, risk factors, clinical presentation, and morbidity. *Ophthalmology* 2008;115 2 Suppl: S3-12.
- Hakim FE, Riaz K, Farooq A. Pediatric herpes zoster ophthalmicus: A systematic review. *Graefes Arch Clin Exp Ophthalmol* 2023;261:2169-79.
- Itoh N, Motokura K, Kumakura A, Hata D, Hata A. Herpes zoster meningitis in immunocompetent children: Two case reports and a literature review. *Pediatr Neurol* 2023;144:1-5.
- Kuchar E, Szenborn L, Lis I, Jaroszevska A, Czeladzka J. Clinical presentation of herpes zoster in immunocompetent and immunocompromised hospitalized children treated with acyclovir. *J Pediatr Hematol Oncol* 2016;38:394-7.
- Sauerbrei A, Wutzler P. Laboratory diagnosis of central nervous system infections caused by herpesviruses. *J Clin Virol* 2002;25 Suppl 1:S45-51.
- Schmid DS, Jumaan AO. Impact of varicella vaccine on varicella-zoster virus dynamics. *Clin Microbiol Rev* 2010;23:202-17.
- Wallace MR, Bowler WA, Murray NB, Brodine SK, Oldfield EC 3<sup>rd</sup>. Treatment of adult varicella with oral acyclovir. A randomized, placebo-controlled trial. *Ann Intern Med* 1992;117:358-63.
- Dworkin RH, Johnson RW, Breuer J, Gnann JW, Levin MJ, Backonja M, *et al*. Recommendations for the management of herpes zoster. *Clin Infect Dis* 2007;44 Suppl 1:S1-26.
- Cohen JI. Clinical practice: Herpes zoster. *N Engl J Med* 2013;369:255-63.
- Marin M, Güris D, Chaves SS, Schmid S, Seward JF. Prevention of varicella: Recommendations of the advisory committee on immunization practices (ACIP). *MMWR Recomm Rep* 2007;56:1-40.
- Weinmann S, Naleway AL, Koppolu P, Baxter R, Belongia EA, Hambidge SJ, *et al*. Incidence of herpes zoster among children: 2003-2014. *Pediatrics* 2019;144:e20182917.

**How to cite this article:** Gupta S. Paediatric herpes zoster: Unmasking shingles in the young. *Karnataka Paediatr J*. doi: 10.25259/KPJ\_9\_2025