Journal of Research in Medical and Dental Science
2022, Volume 10, Issue 7, Page No:118-120
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Available Online at: www.jrmds.in
eISSN No. 2347-2367: pISSN No. 2347-2545

Shingles in a Healthy Child: A Case Report

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ABSTRACT

Shingles, an uncommon viral infection in the pediatric age group, is caused by reactivation of the latent varicella-zoster virus. We report a healthy 3-year-old child who developed shingles in the absence of a prior history of chickenpox. Through this report, we aim to highlight the fact that shingles can present at this age group and in the background of immunocompetence and the absence of previous contraction of chickenpox.

Key words: Pediatric, Shingles, Zoster, Healthy, Immunocompetent, Varicella

HOW TO CITE THIS ARTICLE: Haya Majed AlBaqami, Manal Saeed AlAseeri, AbdulElah Ayed AlQahtani, Yara Saeed AlGhamdi, Turki Abdullah Alsulami, Ibrahim Hadi Tawhari, Shingles in a Healthy Child: A Case Report, J Res Med Dent Sci, 2022, 10 (7):118-120.

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Received: 07-June-2022, Manuscript No. JRMDS-22-68401

Editor assigned: 9-June-2022, PreQC No. JRMDS-22-68401 (PQ);

Reviewed: 24-June-2022, QC No. JRMDS-22-68401;

Revised: 29-June-2022, Manuscript No. JRMDS-22-68401 (R);

Published: 06-July-2022

INTRODUCTION

Shingles, also known as herpes zoster, often affects elderly patients and is caused by the reactivation of Varicella-Zoster virus (VZV) [1,2]. It rarely affects immunocompromised and immunocompetent children [3,4]. Majority of shingles patients have a prior history of chickenpox; however, a proportion of patients who are otherwise healthy may present with shingles despite the absence of prior varicella infection [5]. Live attenuated varicella vaccine is included in the Saudi National Vaccination Program and is administered at the age of 18 months and at school age [6]. Some studies have linked the history of varicella vaccination to the afterward development of shingles [5]. Here, we report a case of a healthy 3-year-old child who developed shingles without a prior history of chickenpox.

CASE REPORT

A 3-year-old healthy boy was brought to the emergency department having a 6-day-history of itchy and mildly painful fluid-filled skin lesions over the right upper extremity. The lesions had initially started at the right hand and progressed to involve the right forearm and arm. The patient's parents denied recent fever, contact with sick patients, a similar presentation in the past, an application of topical formulation, recent outdoor activities, a recent trauma, or allergies. They also denied a history of chickenpox in the past, recurrent infections, or a family history of immunodeficiency. The patient received his varicella vaccine at the age of 18 months, and the BCG vaccination at birth. Review of systems was otherwise negative. On examination, the patient was conscious, alert, vitally stable, and interacting playfully with his parents. There were multiple grouped vesicles on erythematous bases following the dermatomal distribution of C5-C6 (Figure 1). A normal-looking BCG scar was seen over the left upper arm. Complete blood count, liver function tests, and renal profile were all within normal limits. Human Immunodeficiency Virus (HIV) was negative. Varicella-zoster virus (VZV) IgM and IgG antibodies were both positive. A diagnosis of shingles was made, and the patient was started on oral acyclovir as well as paracetamol and topical fusidic acid ointment. We continued to monitor the patient closely as he made a remarkable recovery. After one week, the child had no additional symptoms of pain or discomfort. Post-inflammatory hyperpigmentation was noticed over the areas of the resolved shingles.

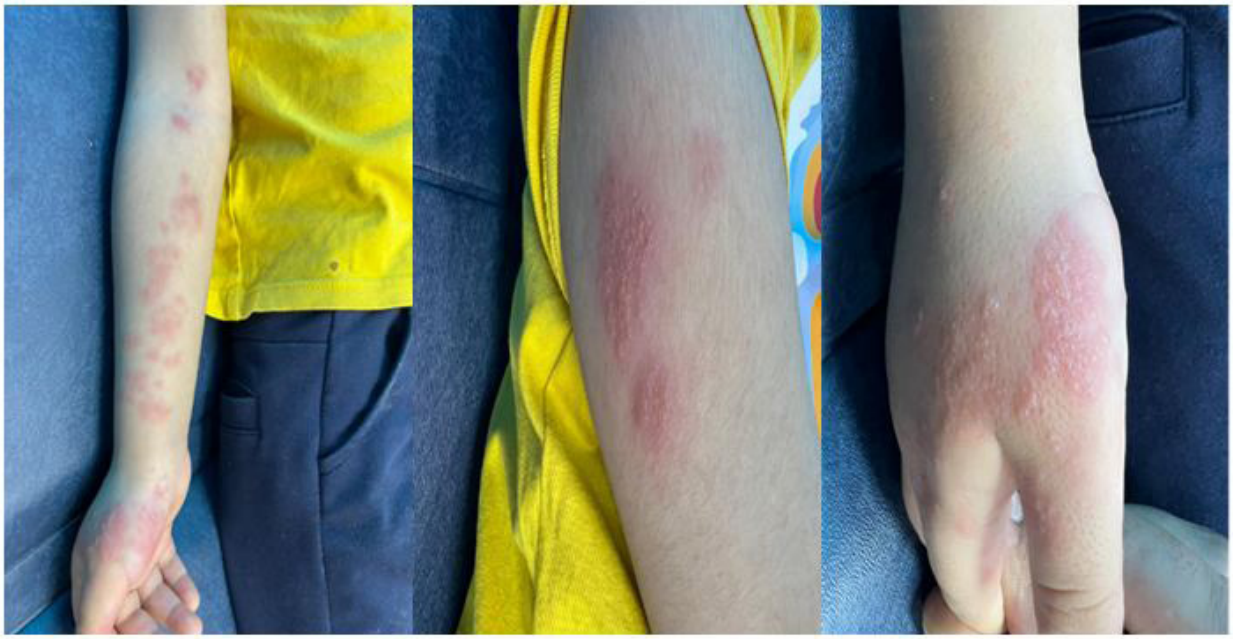

Figure 1: Multiple grouped vesicles on erythematous bases following a dermatomal distribution over the right hand, forearm and arm.

DISCUSSION

Shingles has become a rare disorder following the introduction of the live attenuated varicella vaccine and is estimated to inflict 14 per 100,000 person-years [7]. Less than 1% of shingles cases are in the pediatric age group [8]. Immunosuppressed and immunocompromised patients hold the major proportion of pediatric patients who develop shingles [9]. The immune status of children during the contraction of the infection is believed to play a role in the early activation of the infection [10]. Varicella infection in the first year of life is considered a risk factor for the development of pediatric shingles [4]. Pruritus is a common symptom in the pediatric age group [11]. Thoracic and lumbar dermatomes are typically involved in the patients who are 10 years and older while younger patients have tendency to develop shingles in cervical, trigeminal, and sacral dermatomes [11]. Cranial nerves involvement and disseminated disease are less frequent in the pediatric population when compared with adults [12]. Prior trauma has been linked to the development of zoster at the trauma site within one month after the incident [13]. Varicella-zoster vaccine has the potential to induce a latent infection of the virus and also reactivation as demonstrated in a group of immunocompetent children who had had shingles that was triggered by the vaccine viral strain [14]. Vaccine-strain shingles predominantly manifests in the cervical and lumbar dermatomes, possibly owing to the site of vaccination in the upper arms or thighs [15]. Zoster may also arise from subclinical infection of varicella as reported in another group of healthy children whose zoster strain was found to be a wild-type varicella-zoster virus (VZV) and did not have a prior history suggestive of varicella and were not in contact with zoster or varicella patients [14]. Pediatric zoster, particularly the wild-type VZV, may culminate in meningitis or encephalitis as reported in some cases [14]. Secondary bacterial infection is the most common complication whereas post-herpetic neuralgia is an uncommon complication [16]. Prognosis is overall excellent in healthy children and usually, they would completely recover on their own [8]. In this report, we present zoster following the right cervical dermatomal distribution in a healthy child who had recovered without subsequent complications except for post-inflammatory hyperpigmentation.

CONCLUSION

Shingles results from reactivation of the latent varicella-zoster virus. It occurs rarely in healthy children and possesses an excellent prognosis. Risk factors need to be identified, such as immuno compromising states, early contraction of chickenpox, trauma and chickenpox vaccination. Albeit rarely, zoster in children may be complicated by meningitis or encephalitis. We aim to raise awareness of pediatric shingles and to emphasize the fact that it may present in children who are otherwise healthy and do not have a prior history of chickenpox.

FUNDING SOURCES

None.

CONFLICTS OF INTEREST

None declared.

IRB APPROVAL STATUS

Reviewed and approved by the Directorate of Health Affairs, Ministry of Health, Jeddah, Saudi Arabia.

REFERENCES

1. Hope-Simpson RE. The nature of herpes zoster: A long-

term study and a new hypothesis. Proc R Soc Med 1965; 58:9-20.

2. Wharton M. The epidemiology of varicella-zoster virus infections. Infect Dis Clin North Am 1996; 10:571-581.
3. Nikkels AF, Nikkels-Tassoudji N, Piérard GE. Revisiting childhood herpes zoster. Pediatr Dermatol 2004; 21:18-23.
4. Takayama N, Yamada H, Kaku H, et al. Herpes zoster in immunocompetent and immunocompromised Japanese children. Pediatr Int 2000; 42:275-279.
5. Chun C, Weinmann S, Riedlinger K, et al. Laboratory characteristics of suspected herpes zoster in vaccinated children. Pediatr Infect Dis J 2011; 30:719-721.
6. https://www.moh.gov.sa/en/HealthAwareness/EducationalContent/HealthTips/Documents/Immunization-Schedule.pdf
7. Leung AK, Robson WL, Leong AG. Herpes zoster in childhood. J Pediatr Health Care 2006; 20:300-303.
8. Brodell RT, Zurakowski JE. Childhood shingles. Herpes zoster can occur in healthy children too. Postgrad Med 2004; 115:63-65.
9. Lin HC, Chao YH, Wu KH, et al. Increased risk of herpes zoster in children with cancer: A nationwide population-based cohort study. Medicine 2016; 95:e4037.
10. Bhushan P, Sardana K, Mahajan S. Dermatomal vesicular eruption in an asymptomatic infant. Dermatol Online J 2005; 11:26.
11. Aktaş H, Erdal SA, Güvenç U. Herpes zoster in children: Evaluation of the sixty cases. Dermatol Ther 2019; 32:e13087.
12. Komitova RT, Boykinova OB, Stoyanova NS. The skin and the eye-Herpes zoster ophthalmicus in a healthy 18-month-old toddler. Folia Med 2018; 60:170-174.
13. Thomas SL, Wheeler JG, Hall AJ. Case-control study of the effect of mechanical trauma on the risk of herpes zoster. Br Med J 2004; 328:439.
14. Shang BS, Hung CJ, Lue KH. Herpes zoster in an immunocompetent child without a history of varicella. Pediatr Rep 2021; 13:162-167.
15. Weinmann S, Chun C, Schmid DS, et al. Incidence and clinical characteristics of herpes zoster among children in the varicella vaccine era, 2005-2009. J Infect Dis 2013; 208:1859-1868.
16. Kanamori K, Shoji K, Kinoshita N, et al. Complications of herpes zoster in children. Pediatr Int. 2019; 61:1216-1220.