



Infantile Herpes Zoster: A Case Report

Authors

Shikha Sharma¹, Dilbag Singh Thakur^{2*}, Ritu Rawat³

^{1,2}Senior Resident, Pt. JLNGMC, Chamba, H.P., India

³Assistant Professor, Pt. JLNGMC, Chamba, H.P. India

*Corresponding Author

Dilbag Singh Thakur

Department of Dermatology, Venereology & Leprosy, Pt. JLNGMC, Chamba (H.P.), Pincode 176310, India

Abstract

Herpes zoster (HZ) occurs due to reactivation of the latent Varicella zoster virus and is usually a disease of the elderly. HZ is rarely happening in children, and its incidence increases with age. Infantile herpes zoster is believed to be rare, though recent reports suggests an increasing incidence in infants. Here we report a six month old immunocompetent infant with herpes zoster whose mother had varicella during antenatal period.

Keywords: *Herpes zoster, Infant, Varicella zoster virus, immunocompetent, in utero varicella.*

Introduction

Herpes zoster is the result of reactivation of the Varicella Zoster Virus (VZV) from infected sensory ganglia. Although it is considered to be a disease of adults, in contrast to primary infection with VZV, which tends to occur mainly in children. Herpes zoster in infancy is rare, but well described following intrauterine exposure to VZV [1]. We report a case of herpes zoster in a 6 month old infant whose mother had varicella during antenatal period.

Case report

A 6-month-old baby boy presented in the Dermatology OPD with a 2 days history of vesicular eruption on right upper limb. On examination there were grouped vesicles on erythematous base scattered on the thumb of the right hand and lateral side of the right arm and right shoulder (Figure1). History of excessive cry in child was there. The child was irritable and was not feeding normally. The rest of the growth and development was normal

with body weight of 9 kg. There was history of varicella in his mother during 5th month of pregnancy. The history of long-term drug consumption, malignancy, surgery, transfusion, diabetes mellitus (DM), transplantation, trauma, seizures, spasms, and others that can disrupt the immune system were denied. The patient was born at full term with normal vaginal delivery with birth weight of 2.6 kg.



Figure1: Grouped vesicles on erythematous base

Discussion

Generally, primary varicella tends to occur in childhood, whereas herpes zoster is a disease of adults, with most patients being older than 45 years^[2]. The age adjusted incidence rates of herpes zoster are the lowest (0.45 per 1000 person-years) in the group 0-14 years of age and highest (4.2-4.5 per 1000 person-years) among people 75 years and older^[3].

In the pediatric population, the incidence is lowest in the group 0-5 years of age (20 per 100000 person-years) compared with adolescents (63 per 100000 person-years)^[4]. In infancy or childhood the disease generally results from reactivation of varicella zoster virus infection acquired either in utero or in early infancy while protected by maternal antibodies^[1,5].

Acquisition of herpes zoster in healthy immunocompetent children in early childhood or during intrauterine exposure has been attributed to the immaturity of the immune system^[6]. In 69% of infantile herpes zoster cases (i.e; <12 months of age) reported in the literature, the initial event could be traced to maternal varicella during pregnancy^[7]. Dobrev^[8] observed that maternal varicella during the first trimester is likely to produce congenital varicella syndrome; when women have the disease later in pregnancy, the fetus can develop asymptomatic congenital infection and subsequently present clinically with herpes zoster within the first year of life. Only a few cases of herpes zoster in infants have been reported in India all of which have a documentation of maternal varicella during gestation suggesting that the initial exposure was in utero. In our case the exposure occurred in utero following maternal varicella infection. The baby was not immunodeficient.

The signs and symptoms found in the patient are in accordance with typical representation of HZ. Generally, a diagnosis of HZ can be made based on typical clinical symptoms^[9,10] which is grouped vesicles with the distribution according to the dermatome involved and does not cross the midline of the body. The course of the disease can be preceded by prodromal symptoms accompanied by

burning sensation for 2-3 days, then erythematous macules will appear, followed by grouped vesicular lesions in the ganglion dermatome which involved in 1-2 days. In immune-competent patients, it usually involves only one dermatome. Vesicles will become pustules within 1 week after the onset of redness, followed by ulceration and crust formation in 3-5 days later. Resolution occurs within 2-4 weeks^[11,9]. The appearance of new vesicles after 1 week of onset leads to suspicion of an underlying immune system defect^[11].

It is likely that the vesicular lesion of herpes zoster in this age group are misdiagnosed as impetigo or other cutaneous disorders. With a high degree of suspicion, the dermatomal distribution of a vesicular eruption in infancy should point the clinician toward a correct diagnosis of herpes zoster.

Acknowledgement: Nil

References

1. Lewkonja IK, Jackson AA. Infantile herpes zoster after intrauterine exposure to varicella. *BMJ*. 1973;3:149.
2. Bharija SC, Kanwar AJ, Singh G. Ophthalmic zoster in infancy: a case report. *Indian J Dermatol*. 1983;248:173e175.
3. Ragozzino MW, Melton III LJ, Kurland LT, Chu CP, Perry HO. Population based study of herpes zoster and its sequelae. *Medicine (Baltimore)*. 1982;61:310e316.
4. Donahue JG, Choo PW, Manson JE. The incidence of herpes zoster. *Arch Intern Med*. 1995;155:1605e1609.
5. Laude TA, Raj Kumar S. Herpes zoster in a 4 month old infant. *Arch Dermatol*. 1980; 116:160.
6. Baba K, Yabuuchi H, Takahashi M, Ogra PL. Increased incidence of herpes zoster in normal children infected with varicella zoster virus during infancy: community based follow up study. *J Pediatr*. 1986; 108:372e377.
7. Kurlan Julia G, Connethy Beverly L, Lucky Anne W. Herpes zoster in the first year of

- life following postnatal exposure to varicella zoster virus. Arch Dermatol. 2004;140:1268e1272.
8. Dobrev H. Herpes zoster in infants. Folia Med (Plovdiv). 1994;36:45e49.
 9. Le P, Rorthberg M. Herpes zoster infection. BMJ. 2019;364:k5095.
 10. Bansal P, Bhargava D, Ali S. Herpes-zoster: an update. Int J Med Res Health Sci. 2013;2(4):960-6.
 11. 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 Suppl1:S1-26.