Neonatal Herpes Zoster Ophthalmicus: Two Rare Cases

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Abstract. Two neonates one at age of 15 days and another at age of 20 days were presented with redness, watering, periocular and lid swelling, photophobia and vesicular lesions over forehead on right side of face. Ocular examination revealed ciliary and conjunctival congestion, chemosis, and hazy cornea due to stromal edema. Though herpes zoster is very rare in neonates, the diagnosis of herpes zoster ophthalmicus was made on basis of clinical examination and treated with systemic and topical anti-viral, topical antibiotic and corticosteroid. Both neonates showed dramatic response in seven days treatment and completely cured within four weeks. High clinical suspicion in vesiculo-papular lesion of child of any age can help in early diagnose and early treatment can prevent sequelae of HZO.

Keywords: Herpes Zoster, Child hood zoster, Varicella zoster, Post herpetic neuralgia.

INTRODUCTION

Herpes Zoster Ophthalmicus (HZO) occurs as a result of reactivation of Varicella-Zoster Virus [1]. HZO is rare in neonates and usually associated with history of maternal infection of Varicella Zoster infection (chicken pox) during pregnancy. Early neonatal varicella (chicken pox) infection due to poorly protected maternal immunity may result in childhood zoster [2]. Due to rarity, neonatal HZO is frequently confused with impetigo or other inflammatory cutaneous lesion as clinical manifestations of this type HZO may present in milder form.

CASE 1

A 15 days baby girl from a low socio-economic society presented at cornea department with the complaints of intolerance to light, watering, redness, swelling of lids and periocular region of right side along with popular lesion over right forehead, scalp and also on tip of the nose for a period of 5 days. Maternal chicken pox infection during pregnancy and the varicella vaccination history was absent. Examination revealed vesico-papular rash and pastules over the right side of forehead, scalp extending up to nose tip that is, positive Hutchinson’s sign corresponding to right cranial nerve V-1 dermatome. Other findings were, mild edema of lids with matted eyelashes, ciliary and conjunctival congestion, conjunctival chemosis, hazy cornea due to stromal edema, round, regular and reacting pupil and deep anterior chamber with clear lens. Patient was afebrile and left eye was normal. Tzanck smear, serology and viral culture were not performed. She was diagnosed clinically as right herpes zoster ophthalmicus and treated with homatropine 2% eye drops, 3 times daily; moxifloxacin 0.3% eye drop, 4 times daily; acyclovir 3% eye ointment, 5 times daily; dexamethasone 1% eye drop, 4 times daily in her right eye, mupirocin skin ointment 2 times daily over vesico-pastular lesions and oral acyclovir 8 hourly at dose of 30 mg/kg body weight for 7 days. Dramatic response resulted after 7 days. Vesico-papular rashes and pastules nearly resolved, ciliary and conjunctival congestion was diminished, cornea became clear. Acyclovir eye ointment 3% and Dexamethasone eye drops 0.1%, were tapered over a month. The baby was good and no recurrence in 5 years follow up.

CASE 2

A 20 days baby boy presented to cornea department with vesicular lesion over right side of forehead, swelling of lid, watering and photophobia of right eye for 3 to 4
days. History of maternal chicken pox infection and varicella vaccination of mother during pregnancy was absent. Examination revealed vesiculo-pustular lesion over right forehead not crossing the midline, swelling of lid with discharge and excoriation of margin, conjunctival and ciliary congestion, stromal keratitis without irs detail. His other eye was normal, was afebrile at presentation and had no other systemic abnormalities. The baby was diagnosed as herpes zoster ophthalmicus of rirgt eye basesd on clinical features and treated with topical homatropine eye drops 2%, 3 times daily; moxifloxacin eye drops 0.3%, 4 times daily; ganciclovir eye ointment 0.15%, 5 times daily; dexamethasone eye drops 0.1% 4 times daily in her right eye; mupirocin skin ointment 2 times daily over vesico-pastular lesions and oral acyclovir 8 hourly at a dose of 30 mg/kg body weight for 7 days. Parent was asked for follow up after 7 days but presented after 14 days. Vesico-papular rashes and pastules were resolved and only scar was over forehead, ciliary and conjunctival congestion reduced and cornea became clear. Gancyclovir eye ointment 0.15% and Dexamethasone eye drop 0.1%, were tapered over a month. The patient was in good health up to 2 years follow up.

**DISCUSSION**

HZO is not so much common in children as adults but may occur at first year of life. Age matched incidence rate of HZO showed that it is lowest in 0-14 age group and highest in 75 years and older group [3]. Literature search also showed this incidence is least in 0-5 years age group than adolescent [4]. Children who develop zoster in first 2 years of life, rarely have history of previous chickenpox infection but often have a history of maternal chickenpox during pregnancy. During early infancy, child is partially protected by maternal antibody and this poor immunity may results in child hood zoster. In a few instances, primary infections by varicella zoster virus (VZV) appear to provoke zoster rather than chickenpox but the explanation is not known. On occasion zoster may also occur simultaneously with a primary attack of chickenpox. Post-herpetic neuralgia is a common complication in adult but interestingly it is rare in children [2]. In children, Herpes zoster may present with uncommon features which passed through devastating sequelae. Though herpes zoster infection in children is rare but it is 122 times higher in comparison to childhood malignancy. As Varicella vaccine are live attenuated, its vaccination is also a risk factor [5]. Intrauterine exposure to VZV is an example of infection of immunocompetent patients it is hypothesized that maternal antibody protection causing less expressed clinical features [6]. Due to its rarity and milder clinical manifestation, HZO in children may missed. Clinician’s high degree of suspicion of any vesicular lesion in children can diagnose the case and treatment will prevent any unwanted compli-
occurrences may be more common than expected due to poor immunity, mild clinical manifestation, misdiagnosed as impetigo and lack of investigations for virus detection.

CONCLUSION

Though herpes zoster ophthalmicus is very uncommon in neonates' dermatomal distribution of vesicular eruption in infancy strongly suggests the diagnosis of herpes zoster ophthalmicus and early treatment with systemic antiviral medication can prevent the severe complications.

REFERENCES


