A CASE OF HERPES ZOSTER OPHTHALMICUS WITH HEMORRHAGIC UVEITIS IN A TWO YEAR OLD CHILD

ZAFAR IQBAL AND MUHAMMAD DAUD KHAN

Department of Opthalmology,
Postgraduate Medical Institute,
Lady Reading Hospital Peshawar.

INTRODUCTION

Herpes zoster ophthalmicus (HZO) is a disease usually affecting elderly people. It only rarely occurs in children. We report an unusual case of HZO in a two year old child who in addition to other ocular complications also developed hemorrhagic uveitis.

CASE REPORT

A two year old child presented to our unit with a seven days history of rash, vesiculation and discharging ulcers on the left side of forehead and temple, also involving the left eye and nose. The child did not have a history of varicella Zoster infection in the family members. However, a child in the neighbourhood had chickenpox.

On examination, the child had bilateral marked oedema of eyelids. He had vesiculo-ulcerative lesions on left frontal and temporal regions, also involving the left upper eyelid and the nose including its tip (Figure-I). With topical anaesthesia, warp restrain and eyelids retraction of the left eye, we found that he had congestion of conjunctiva with mucopurulent discharge, hazy cornea and a miosed pupil. Fundus was not visible. Examination of the right eye was unremarkable. Systemic examination carried out by a consultant paediatrician was also unremarkable. His complete blood count showed relative lymphocytosis. Peripheral smear, urinalysis and chest radiograph did not show any pathology. Serum for the presence of VZ antibodies was not taken. We started him on Acyclovir (AVC) eye ointment five times per day and topical antibiotics for skin and ocular lesions. He also received anti-inflammatory and anti-histaminic medication as well as systemic antibiotics. During this course, the skin and ocular lesions showed signs of resolution (Figure-II). Five days later, we added topical steroids for his skin and ocular condition. On the same evening, he developed hyphaema in the left eye. We increased the frequency of topical ophthalmic steroids and a day later added systemic steroids to his medication. On examination under anaesthesia (EUA) performed a day later, we found that in the left eye he had conjunctival congestion, corneal stromal haziness and a small epithelial defect in the centre of the cornea. We also found a clot filling the lower third of anterior chamber laterally. His pupil was dilated, fundus was not visible and the intraocular pressure was 4mm Hg. We repeated EUA three days later and found that his conjunctival congestion had reduced, cornea had became clearer, ulcer had resolved and the clot had reduced in size. However, fundus view was still not possible. The child was allowed to go home

Fig. I. A case of Herpes Zoster Ophthalmicus in a two year child. — Skin and Ocular Lesions

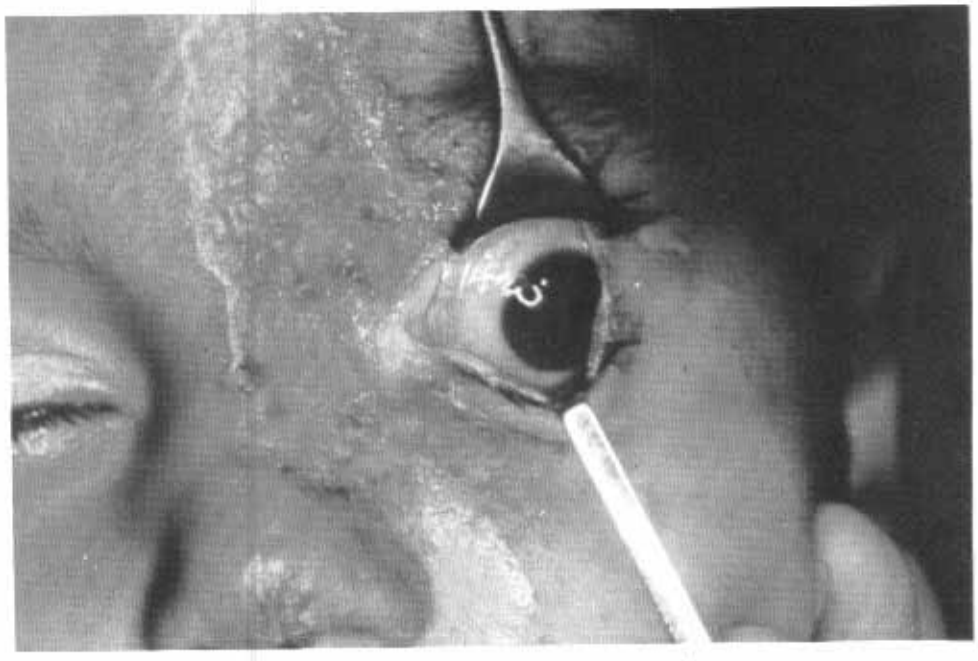

Fig. II. HZO in a two year child — Ocular Lesion.

two days later on topical steroid-antibiotic combination. On follow-up visit, five days later we found that his skin lesions had almost healed and periorbital oedema completely subsided. However, he had developed left divergent squint. We again performed and EUA and found that his conjunctival congestion has subsided, cornea had become clearer and hyphaema had totally resolved. We could now visualize the fundus which was normal and his intraocular pressure was 4.5mm Hg.

DISCUSSION

HZO is a disease caused by the double-stranded DNA Varicella-Zoster virus, a Type-3 Herpes Virus[1]. The primary infection almost always occurs in childhood which manifests as chickenpox. The virus then remains dormant in dorsal root ganglia of cranial and spinal nerves. Reactivation of the virus usually occurs in adults as herpes zoster[2]. Impaired cellular immunity results in recurrent infections. Ten percent of all herpes zoster cases affect the ophthalmic division of trigeminal nerve, fifty to seventy percent of these develop ocular complication[1,3]. Anterior uveitis and the various varieties of keratitis are the commonest, affecting 92% and 52% of patients with ocular involvement, respectively[4]. Although uveitis is a common complication of HZO, the uveitis is seldom severe enough to cause hyphaema[4]. This rare complication did occur in our case; however, with prompt medication it resolved quickly without any sequelae.

HZO, although a disease of adults also rarely affects children[1]. Such cases have also been described in infants[5] including one case in which all three divisions of the fifth cranial nerve were involved[6]. It is postulated that the primary infection in these cases was maternal chickenpox with probable reactivation of herpes zoster in the offspring. This association was first noted in 1947[7] and has subsequently been recognised as the Congenital Varicella Syndrome[5,8]. A case of presumed HZO in a newborn was though to be in-utero transmission of VZ virus form the mother acquiring chickenpox in the second trimester of pregnancy[9].

The choice of medication in HZO has been quite controversial. Earlier reports suggested that prompt treatment with oral Acyclovir reduces the severity of the skin eruptions, the incidence and severity of late ocular and systemic complications, and the intensity of postherpetic neuralgia[2,3]. However recent studies have shown that oral ACV has little or no preventive effects on the ocular complication of HZO[10]. Current evidence favours the use of topical ACV alone for treatment of established ocular complications, with topical cycloplegics for keratitis and uveitis, analgesics to reduce pain and drugs to reduce intraocular pressure if secondary glaucoma develops. Corneal complications of HZO sometimes require surgical intervention[2].

REFERENCES

1. Kanski JJ. Clinical Ophthalmology: a systematic approach. 3rd edition. Butterworth Heinemann Ltd. 1994;111: 5.
2. Karbas M, Raizman Mb, Schaman JS. Herpes zoster ophthalmicus. Surv ophthal 1992; 36(6): 395.
3. Harding SP. Management of ophthalmic zoster. J Med Virol. 1993; 1: 97.
4. Hayasaka S, Watanabe M, Yamamato Y, Noda S, Sekimoto M, Setogawa T. Herpes zoster ophthalmicus complicated by hyphaema and hemmorhagic glaucoma. Ophthalmologica 1988; 196 (4): 185.
5. Gershon AA. Chickenpox, Measles, Mumps. In: Remington JS, Klein JO, eds. Infectious diseases of the fetus and newborn infant. 3rd ed. 1990: 395-445.
6. David TJ, William MI. Herpes zoster in infancy. SCAnd J Infect Dis 1979; 11: 185.

7. La Foret, Lynch LL. Multiple congenital defects following maternal varicella. N Engl J MED 1947; 236: 534.

8. Alkalay AL, Pomerace JJ. Fetal varicella syndrome. J Paediatr 1987; 111: 320.

9. Singh J, Gibson JM. A case of presumed congenital herpes zoster ophthalmicus. Br J of ophthal 1993; 77: 459.

10. Hoang Xuan T, Buchi ER, Herbort CP, Denis J, Fort P, Thenault S, Pouliguen Y. Oral acyclovir for herpes zoster ophthalmicus. Ophthalmology 1992; 99 (7): 1062.

11. Aylward GW, Claoue CM, Marsh RJ, Yasseem N. Influence of oral acyclovir on ocular complications of herpes zoster ophthalmicus. Eye. 1994; 8(1): 70.