

Chickenpox chorioretinitis

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Abstract

Chickenpox infection in an adult was complicated by peripheral chorioretinitis and treated with oral acyclovir. Similarities of this case to the recently proposed mild type of acute retinal necrosis syndrome are discussed.

A 27-year-old woman presented with a short history of floaters and blurring of vision in the right eye. Both the patient and her 3-month-old infant had had typical varicella infection in the previous two weeks. She had symptoms of recent sore throat, pyrexia, headache, and varicella vesicular eruption on the trunk.

The visual acuity was 6/6 Snellen in both eyes. There was 1+ external injection in the right eye. The intraocular pressures were normal. In the right anterior chamber 1+ cells were present, with inferior keratic precipitates. There were 2+

posterior vitreous cells in the right eye. Multiple areas of active yellow-grey foci of chorioretinitis (Fig 1) were present throughout 360° of the peripheral fundus in the right eye. Perivasculitis (Fig 2) was also noted. The left eye was normal.

Typical varicella eruption was present on the back and abdomen. Petchiae were visible in the pharynx. Varicella complement fixation tests were strongly positive. All other serological and immunological studies gave normal results.

Topical steroids and mydriatics were prescribed. Because of an impression of progression of the clinical signs during the second week, with the development of additional yellow-white exudates in the peripheral fundus, which became confluent (Fig 3), acyclovir 200 mg four times daily was prescribed orally for seven days. One month later the anterior chamber was quiet and the peripheral lesions had become scarred, with localised retinochoroidal atrophy and secondary

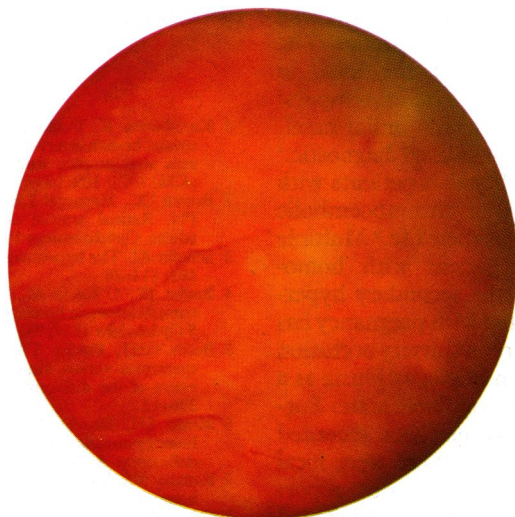


Figure 1 Foci of active chorioretinitis in peripheral fundus.

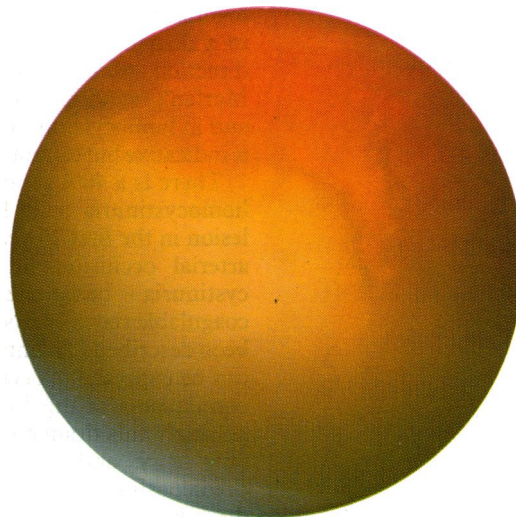


Figure 3 Progression of exudates, which became confluent.

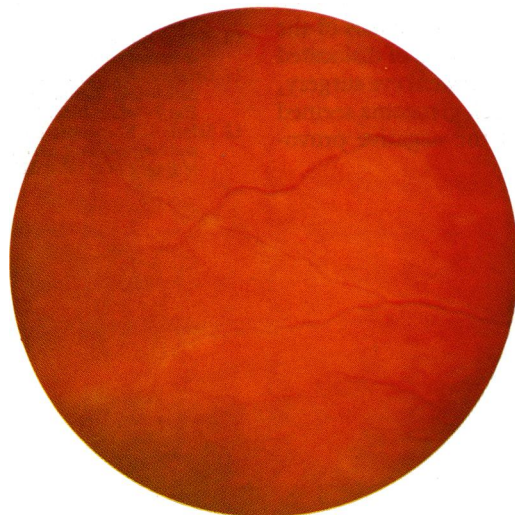


Figure 2 Perivasculitis.

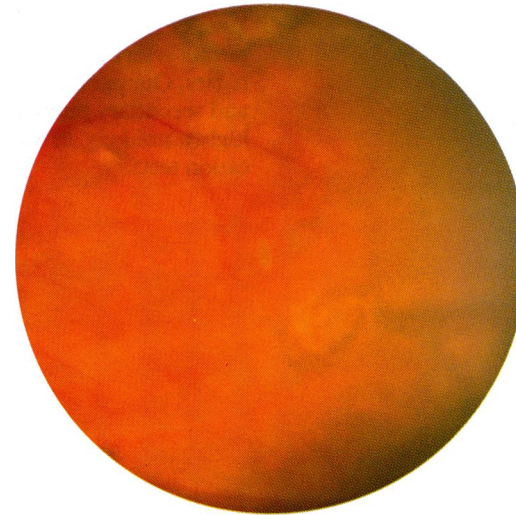


Figure 4 Localised retinochoroidal atrophy in areas where foci of chorioretinitis previously existed.

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Accepted for publication
11 April 1990

retinal pigment epithelial changes evolving (Fig 4). No retinal breaks occurred.

Discussion

Varicella-zoster virus (VZV) is a ubiquitous human infection, producing chickenpox in children and zoster in adults. While the ophthalmic manifestations of herpes zoster are well recognised, ocular complications of varicella (chickenpox) are rare. Second attacks of chickenpox are most unusual, as immunity is lifelong. Only 1.8% of cases of chickenpox occur after the second decade of life and then produce more severe systemic illness than in children.¹

Vesicular lid lesions or conjunctivitis and occasionally corneal involvement occur in 4% of unselected cases of chickenpox.^{2,3} Other ocular manifestations are unusual and have included canalicular obstruction,⁴ anterior uveitis,^{3,5} cataracts,⁶ optic neuritis,⁷ and optic disc pigmentation.⁸ Extraocular muscle palsies,⁹ internal ophthalmoplegia,¹⁰ and central nervous system disorders ranging from aseptic meningitis to fulminating encephalitis occur.¹¹ One in 1000 cases of varicella involve the central nervous system clinically.¹¹ There is one other report of involvement of the retina or choroid in acute chickenpox infection: bilateral optic neuritis and a macular lesion resembling 'chorioretinal atrophy' occurred during varicella encephalitis in an infant.¹²

Choroiditis has been described with herpes zoster ophthalmicus.¹³

Matsuo and associates recently described a mild type of acute retinal necrosis syndrome.¹⁴ Six patients developed peripheral retinal exudates which progressed gradually to the posterior pole without causing retinal detachment. In three patients antibody to VZV was found in the aqueous humour. One patient had developed varicella eruption with peripheral retinal exudates in late pregnancy and was treated with prednisolone and acyclovir intravenous infusions post partum.¹⁵ Our patient's peripheral fundus signs resembled the Japanese findings and thus may have also exhibited a mild form of the acute retinal necrosis syndrome. The agent responsible for acute retinal necrosis syn-

drome may be a mutant strain of VZV with a predilection for the retina.^{16,17}

Specific antiviral treatment, or interferon, is indicated when varicella infection occurs in immunocompromised patients.¹⁸ In view of the progressive nature of the chorioretinitis we considered acyclovir was indicated in our patient. Matsuo and colleagues' six patients were treated with high doses of systemic steroids, with the addition of acyclovir in four cases.¹⁴

The peripheral fundus should be examined in varicella patients with visual symptoms, and any further cases of mild acute retinal necrosis syndrome identified should be reported.

We thank the Wellcome Foundaton Ltd for assistance with publication costs.

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