CASE REPORTS

COMBINED GANCICLOVIR AND FOSCARNET IN PEDIATRIC CYTOMEGALOVIRUS RETINITIS

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Cytomegalovirus retinitis is the leading cause of blindness in adults and children with acquired immunodeficiency syndrome (AIDS). Although clinical trials on therapy exist for adults, management of cytomegalovirus retinitis in children is not as well-documented. This report describes the clinical course of a 3-year-old child with cytomegalovirus retinitis. After initial failure with single-agent ganciclovir intravenous treatment, early institution of combined treatment with foscarnet and ganciclovir halted progression of the retinitis. This case report highlights the aggressive nature of cytomegalovirus retinitis in children and the consideration of early combined therapy compared to adult patients. (*J Natl Med Assoc.* 1996;88:661-662.)

Key words • cytomegalovirus • retinitis • acquired immunodeficiency syndrome (AIDS)

Cytomegalovirus retinitis occurs less frequently in children with AIDS than in adults. As a result, treatment guidelines for cytomegalovirus retinitis in this population are not well established. Several reports suggest that the retinitis seen in younger children and infants may be more aggressive and difficult to treat.[1,2] This article reports such a case treated with combined ganciclovir and foscarnet.

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CASE REPORT

A 3-year-old female was referred to Howard University Hospital in March 1993 for the management of cytomegalovirus retinitis in the right eye (Figure). At that time, she was treated with induction intravenous ganciclovir for 2 weeks (7 mg/kg twice a day) followed by maintenance intravenous therapy (7 mg/kg once a day). The patient was human immunodeficiency virus (HIV) positive at birth, acquiring the infection by vertical transmission. Past medical history included pneumocystis pneumonia at 3 months of age and oral thrush at age 3 years. At the time of referral, her absolute CD4 count was 31.

Two months later in May 1993, she could not maintain fixation in the right eye while the left eye was central, steady, and maintained. An afferent pupillary defect was present in the right eye. Examination of the right eye revealed extensive necrotizing retinitis of the peripheral retina and macula with total retinal detachment. The left eye had active cytomegalovirus retinitis involving the nasal half of the fundus but not extending to the posterior pole. In light of the disease progression while on maintenance ganciclovir, intravenous foscarnet induction (60 mg/kg three times a day), followed by maintenance foscarnet (60 mg/kg twice a day) was added to the therapeutic regimen.

Repeat examinations 2 and 4 weeks following the induction of foscarnet showed no progression of disease. The border of active cytomegalovirus retinitis in the left eye remained active until the eighth week following the initiation of foscarnet. Twelve weeks after beginning combined therapy, her fixation in the left eye remained central, steady, and maintained, and the border of retinitis was inactive. During the next 8 weeks, the disease remained quiescent, and she had no serious

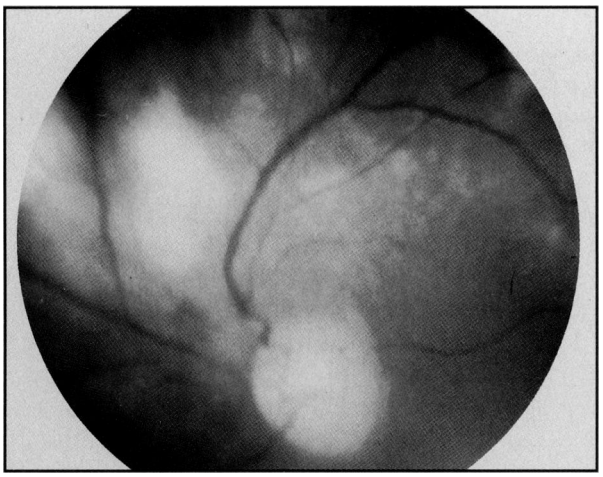

Figure. Cytomegalovirus retinitis.

side effects from the therapy. The patient died 20 weeks after beginning combined therapy of unrelated systemic disease.

DISCUSSION

In adults with cytomegalovirus retinitis, treatment with ganciclovir or foscarnet results in regression of the retinitis within 10 to 14 days. However, reactivation occurs at a median of 2 months after initiation of therapy.[3] Similar data for children with cytomegalovirus retinitis is not available. Progression of the retinitis can be managed by switching to the alternative antiviral agent or by using combined therapy. In adults, combined therapy with ganciclovir and foscarnet has been shown to be effective in suppressing cytomegalovirus replication and may have greater antiviral efficacy than either therapy alone.[4,5] Also, combined therapy may prolong the time to progression of the retinitis.

This case is an example of the aggressive cytomegalovirus retinitis seen in children with AIDS. Similar to the report of Butler et al,[2] our case illustrates the devastating progression of the retinitis with loss of vision while on maintenance single-agent therapy. After institution of combined ganciclovir and foscarnet, the retinitis became inactive and remained so for 20 weeks until the time of death. During this time, there were no adverse affects related to the combined therapy.

This report provides further evidence that combined therapy with ganciclovir and foscarnet appears to be effective in the treatment of children with cytomegalovirus retinitis with progression on single-agent therapy. Clearly, a randomized trial is necessary to show any differences between combined therapy versus single-agent therapy for patients with progressive retinitis. In the interim, clinicians should be aware of the potential for aggressive disease despite treatment in young children with cytomegalovirus retinitis.

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