Recurrent Cytomegalovirus Retinitis in a Patient with Non-Hodgkin's Lymphoma*

Non-Hodgkin Lenfomalı Bir Olguda Nüks Sitomegalovirüs Retiniti

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ABSTRACT

A 30-year-old female patient presented at our clinic suffering from decreasing vision in the left eye for the last 2 weeks. According to the patient file, she had been started on chemotherapy six months ago due to a diagnosis of stage 4 peripheral T-cell non-Hodgkin's lymphoma. There was common vascular sheathing with an appearance of typical frosted branch angiitis and white retinal lesions related to retinal hemorrhages in the right eye on fundoscopic examination. The left retina was hazy on fundoscopic examination but exudative lesions were observed around the optic disc and macula and on the peripheral retina. HIV and CMV IgM tests were negative on serological tests, but the CMV IgG test was positive. CMV retinitis was diagnosed and intravenous ganciclovir administered as the treatment. Ganciclovir was stopped after 4 months, but CMV retinitis recurred in both eyes two weeks later. The patient was transferred to the hematology service as he was in poor general condition but later passed away. In conclusion, we recommend at least six months ganciclovir therapy for such cases to prevent the recurrence of the disease.

Key Words: Cytomegalovirus retinitis, ganciclovir, non-Hodgkin lymphoma.

ÖZ

Otuz yaşındaki kadın hasta sol gözünde 2 haftadır görme azalması şikayeti ile kliniğimize başvurdu. Hastanın hikayesinden 6 ay önce evre 4 periferal T-hücreli non-Hodgkin lenfoma tanısı ile kemoterapi görmeye başladığı öğrenildi. Fundoskopik muayenede sağ gözde tipik donmuş ağaç dal anjitisi görünümünde yaygın vasküler kılıflanma ve retinal hemorajilerle ilişkili beyaz retinal lezyonlar mevcuttu. Sol göz fundoskopik muayenede retina flue olarak değerlendirilmekle birlikte optik disk çevresinde ve periferik retina da eksudatif lezyonlar görülmekteydi. Serolojik testler HIV ve CMV Ig M testi negatif, CMV Ig G positif olarak sonuçlandı. Hastaya CMV retiniti tanısı konularak intravenöz gansiklovir tedavisi başlanıldı. Gansiklovir 4 ay sonra kesildi, ancak 2 hafta sonra her iki gözde CMV retiniti nüks etti. Genel durumu bozuk olan hasta hematoloji servisine transfer edildi ancak hasta kaybedildi. Sonuç olarak, bu tür olgularda hastalığın nüksetmemesi için en az 6 ay gansiklovir tedavisi önermekteyiz.

Anahtar Kelimeler: Gansiklovir, non-Hodgkin lenfoma, sitomegalovirüs retiniti.

INTRODUCTION

Cytomegalovirus (CMV), which belongs to human herpes virus family, rarely causes clinical symptoms in individuals with a normal immune system during primary infection. However, it can cause opportunistic infections in any period of life in cases of immunodeficiency. CMV retinitis is the most common opportunistic infection in Acquired Immune Deficiency Syndrome patients.[1,2] The incidence and prevalence of CMV retinitis has declined significantly with Highly Active Antiretroviral Therapy treatment.[3] However, CMV retinitis can occur in the presence of a low CD4 T lymphocyte count and in patients treated for Wegener's Granulomatosis, Systemic Lupus Erythematosus, and immunosuppressive therapy after organ transplantation. We present a case of CMV retinitis developing during treatment for non-Hodgkin's lymphoma in this article.

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CASE REPORT

A 30-year-old female patient presented at our clinic suffering from decreasing vision in the left eye for the last 2 weeks. According to the patient file, she had been started on chemotherapy six months ago due to a diagnosis of stage 4 peripheral T-cell non-Hodgkin's lymphoma. A total of 8 chemotherapy cycles had been planned with cyclophosphamide, adriamycin, vincristine and prednisolone at 4-week intervals. A decrease in visual acuity had developed after the sixth cycle. The visual acuity was 0.8 in the right eye and hand movements level in the left eye when the patient presented at our clinic. Both eyes had anterior chamber reaction, and the left eye had posterior synechiae. Other anterior segment findings were normal. Both eyes had vitritis. There was common vascular sheathing with an appearance of typical frosted branch angiitis and white retinal lesions related to retinal hemorrhages in the right eye on fundoscopic examination (Figure 1).

The left eye had vitreal haze. The left retina was hazy on fundoscopic examination but exudative lesions were observed around the optic disc and macula and on the peripheral retina (Figure 2). HIV and CMV IgM tests were negative on serological tests, but the CMV IgG test was positive. We couldn't take any anterior chamber or vitreous sample because the patient refused to participate. The diagnosis was therefore made clinically and we continued the treatment as the response was positive. CMV retinitis was diagnosed and 2x5 mg/kg/day intravenous ganciclovir, topical dexamethasone and cyclopentolate were used as the treatment. Visual acuity in the left eye increased to about 0.1 at the end of the second week of treatment. The white retinal lesions and vascular sheathing regressed in right eye. Vitreous condensation became permanent in the left eye. However, retina details were observed more clearly and vascular sheathing, retinal hemorrhages, and exudates detected. The ganciclovir dose was decreased to 2 x 2.5 mg/kg /day.

Figure 1: *Retinitis lesions appearance of typical frosted branch angiitis in the right eye at the initial ophthalmological examination.*

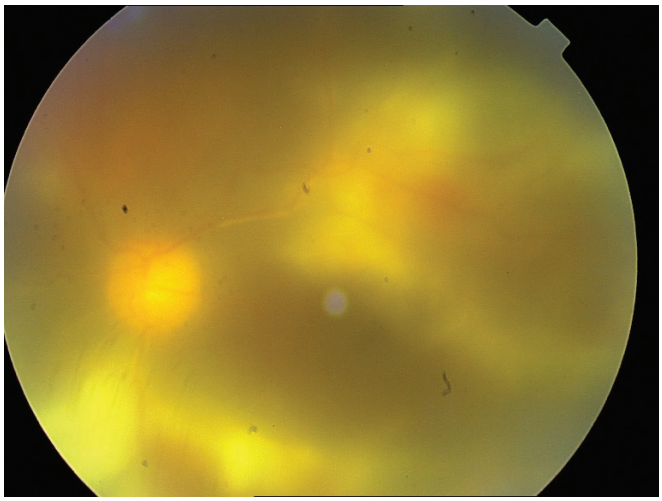

Figure 2: *Left eye fundus photograpgh illustrating exudative lesions around the optic disc and macula at the beginning of treatment.*

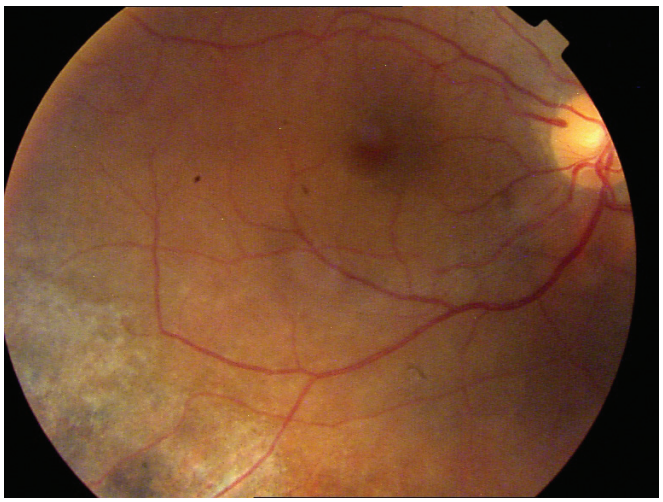

Figure 3: *Pigmentation of the retinitis lesion in the right eye 3 months after begining of ganciclovir treatment.*

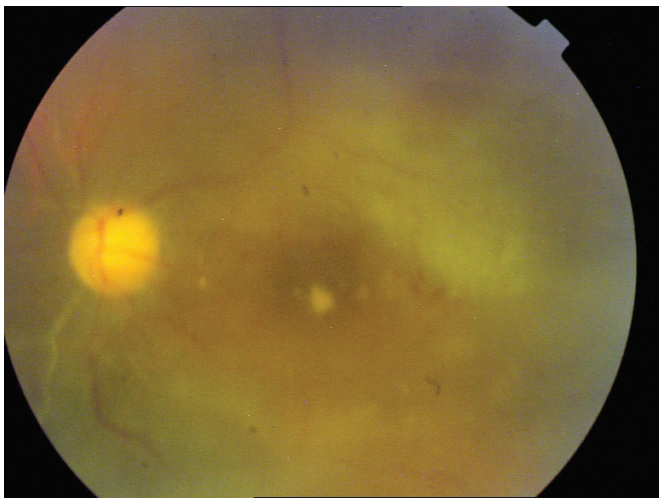

Figure 4: *Scarified retinal areas 3 months after initial therapy.*

Topical medications were gradually discontinued after 2 weeks in the right eye and 4 weeks in the left eye. The involved retinal area was completely scarified 3 months after initial therapy (Figure 3,4). Ganciclovir was stopped after 4 months, but the CMV retinitis recurred in both eyes two weeks later. The visual acuity level was 0.3 in the right eye and hand movements in the left eye. The patient's hematological tests showed pancytopenia. The patient was transferred to the hematology service as she was in poor general condition but later passed away.

DISCUSSION

Both lymphoma and chemotherapeutic drugs can cause defects in the immune system. However, opportunistic infections rarely occur. Although CMV retinitis occurs with low CD4 T lymphocyte levels, it can rarely also occur with a normal CD4 T lymphocyte level.[4,5] Intraocular lymphoma can easily be mixed up with opportunistic infections such as CMV retinitis.[6] The ocular lesions in CMV retinitis appearing in a case of lymphoma can include white retinal lesions, intraretinal hemorrhages, vasculitis and vascular sheathing, vitritis and anterior chamber reaction.[6]

CMV retinitis is treated with systemic ganciclovir, but its long-term usage causes serious side effects such as bone marrow depression.[7] Intraocular ganciclovir implants are used in order to avoid the systemic side effects of ganciclovir. However, serious ocular complications may develop with intraocular implant usage.[8] Vote et al.,[4] administered systemic ganciclovir for the treatment of CMV retinitis in a patient with lymphoma and they stopped treatment after 3 months. However, they observed recurrence of the CMV retinitis. They then observed that the disease did not relapse after additional systemic ganciclovir treatment for 6 months.

In this study, CMV retinitis recurred two weeks after 4 months of systemic ganciclovir treatment was stopped. Treatment of CMV retinitis recurrence was not possible because the patient passed away. However we recommend ganciclovir therapy for at least six months for such cases to prevent the recurrence of the disorder. Furthermore, when a patient with lymphoma presents with a visiual complaint, CMV retinitis should be keep in mind although it is rarely seen.

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