

Ocular Manifestations of a Child with ALL after Chemotherapy

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(J Bangladesh Coll Phys Surg 2014; 32: 51-52)



Fig.-1 A: Fundus photograph of Right eye at presentation shows scared retina in the posterior pole involving macula.

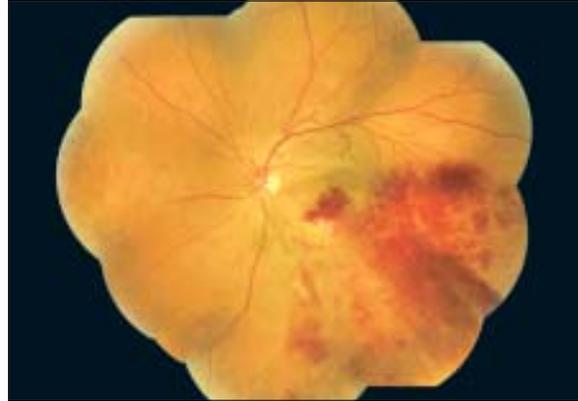


Fig.-1 B: Fundus photograph of Left eye shows retinal hemorrhage against a background of edematous retina in the posterior pole, also there is vascular sheathing.



Fig.-2A: Fundus photograph of Right eye after treatment shows scared thinned retina in the posterior pole involving macula.

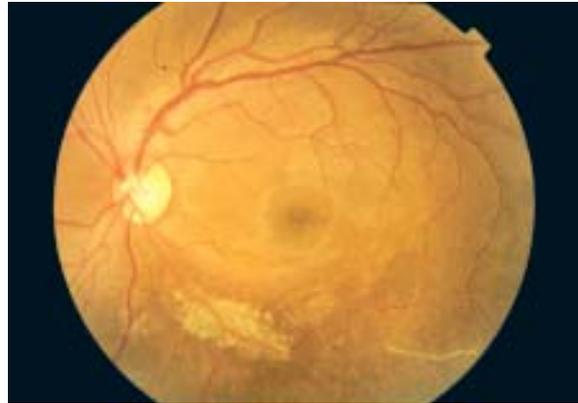


Fig.-2B: Fundus photograph of Left eye shows healed lesion leaving behind small scar outside the macula.

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A nine years old boy presented with sudden loss of vision both eyes. On examination his best corrected visual acuity was HM in right eyes , 6/60 in left eye, anterior chamber was quiet in both eyes, crystalline lens were clear in both eyes, vitreous was clear in both eyes. The fundus examination with indirect ophthalmoscope right eye shows granular area with thinned scared retina in the posterior pole involving macula(Fig:1A), left eye

shows a larger areas of retinal hemorrhage against a background of edematous retina in the posterior pole extending from disc to the vascular arcades, along the distribution of nerve fibers and associated blood vessels (Fig:1B). This type of retinal hemorrhage, retinal edema and vascular sheathing may be due to vasculitis retinae due to any cause of vasculitis (e.g- Eales disease, tubercular, sarcoid, syphilis, SLE, Behcet's disease etc),CMV retinitis. Retinal thinning and scar may be due to any type healed retinal necrosis (Acute retinal necrosis, Cytomegalovirus retinitis, Progressive outer retinal necrosis, Behcet's disease, SLE etc). Clinically we diagnosed as healing CMV retinitis in right eye and active CMV retinitis in his left eye. He is a diagnosed case of acute lymphoblastic leukaemia under chemotherapy since 31 months. He was medicated with vincristine, asparaginasae, methotrexate, daunorubicin, 6-mercaptopurine,cyclophosphamide, Cytosine Arabinoside, oral prednisolone. He was negative for HBs Ag/HIV/HCV. Laboratory tests done by oncologist after diagnosis of CMV retinitis showed blood count within the normal range, erythrocyte hemosedimentation rate of 60 mm, normal C3 and C4, normal urine routine,microscopical examination and absence of proteinuria in the 24 hour collection, positive IgM and IgG CMV serology, positive PCR for CMV from blood. After 4th cycle of chemotherapy he developed ocular symptoms. The induction was initiated with I/V ganciclovir 12 hourly for four weeks followed by I/V ganciclovir once daily for 40 days, up to negative CMV DNA from blood under supervision of oncologist. Subsequently the lesion started to regress. Serial CBC, liver function test and DNA for CMV from blood were done 2 weekly. After 4 weeks of treatment anterior uveitis and vitritis developed which was treated with topical and oral predisolone. Two months after initiation of ganciclovir therapy CMV DNA was negative from blood. The fundus showed large area scarred thinned retina involving macula in right eye(Fig:2A) and small

area of scar in left eye sparing macula (2B). The final visual acuity was 6/60 in right eye, 6/9 in left eye.

Discussion:

Cytomegalovirus (CMV) retinitis is a disease which mainly affects patients with acquired immunodeficiency syndrome (AIDS) as well as other immunosuppressed patients, such as the organ transplant recipients under immunosuppressive therapy, those on chemotherapy for malignant diseases, patients with autoimmune disorders like systemic lupus erythematosus (SLE) under immunosuppressive treatment.¹⁻⁴ There are a few published series of patient with CMV retinitis without HIV infection.^{5,6}

Conclusion:

We believe it is important to inform the existence of this serious and rare clinical complication, especially in our community, where the chronic use of corticosteroids is a routine practice, warning of the irreversible consequences if early diagnosis and treatment are not established.

References:

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