

Case Report

A Young Immunocompetent Cytomegalovirus Retinitis Patient

Seyyed Rahim Naseri¹, Shahnaz Sali^{1*}, Anita Yazdani¹, Salime Peyghan¹

¹ Infectious Diseases and Tropical Medicine Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran

Received: 21 June, 2018; Accepted: 16 December, 2018

Abstract

Background: Rare cases if CMV retinitis were presented in immunocompetent patients (Nine cases)

Cases Report: A 23 years old man with chief complain of sudden decrease of visual acuity and floater in left eye was under investigation. He was immunocompetent patient without any human immunodeficiency virus and immunosuppression diseases. He was diagnosed as a case of cytomegalovirus retinitis and was treated by intravitreal Ganciclovir. His choroid retinitis was improved after treatment.

Conclusion: in retinal vasculitis before approaching anti-inflammatory or anti-VEGF therapy ophthalmologists should take into account infectious causes.

Keywords: Cytomegalovirus, Immunocompetent, Retinitis

***Corresponding Author:** Shahnaz Sali. Infectious Diseases and Tropical Medicine Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran. Email:Dr.shsali@gmail.com, sh.sali@SBMU.ac.ir
ORCID:0000-0001-84940611

Please cite this article as: Naseri SR, Sali Sh, Yazdani A, Peyghan S. A Young Immunocompetent Cytomegalovirus Retinitis Patient. *Novel Biomed.* 2019;7(1):35-7.

Introduction

Cytomegalovirus retinitis (CMVR) has been the most common opportunistic ocular infection and the leading cause of visual loss among acquired immunodeficiency syndrome (AIDS) patients with representing about 90% case of all infectious retinitis in this population^{1,2}, but rare case reports were presented in immunocompetent patients (Nine cases)³. Despite its well characterized clinical course and multitude of high quality studies for the diagnosis and treatment of this disease CMVR is described with visual loss, flashing, floaters and conjunctivitis. CMV-PCR and ophthalmoscopy help to diagnosis⁴.

Case Report

A 23 year-old man from Ardakan, Yazd province, in



Figure 1. CMV retinitis at baseline

Iran with the chief complain of sudden decrease of visual acuity is considered. He states that a floater in his left eye was appeared three weeks ago, when he wake up in the morning. He had any symptoms else such as flu like symptoms, redness, conjunctivitis and fever.

In clinical investigation weep was negative in his eye

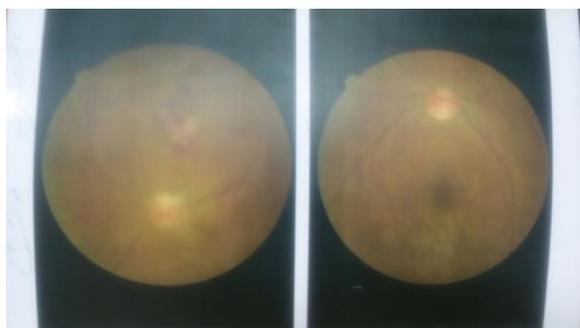


Figure 2. Fundus view (FV) disc pallor.



Figure 4. disc pallor and occluded vessels.

and movement was normal. He visited to shahid-saddoghi-Hospital in Yazd province where he was treated with pulse of Prednisolone and Celcept for Behcet's disease. He was referred to shahid-labbafinejad-Hospital in Tehran.

In his past medical history there was no similar disease: such as human immunodeficiency virus (HIV) or another diseases, only recurrent mouth Aftus was positive, drug history, allergy and family history were negative, physical exam items was BP = 110/70 PR = 82 RR = 16 OT = 36.7°C, Ocular movement was normal, visual acuity: Left eye: finger count, Right eye: normal, eye redness after intravitreal injection was positive, dermathomal pathergy test was negative, ophthalmologist fundus copy report was: Macula Edema, peripheral hemorrhage, Macula lesion preferred CMV-Retinitis. He was treated with Ganciclovir 375mg/IV/Bd and Ganciclovir 200µg intravitreal for 2 weeks. His visual acuity improved from 1/10 to 3/10 during the treatment. He was also treated with treated with Valganciclovir 900mg/po/BD for 12 weeks and treatment was follow up by ophthalmology examinations monthly.

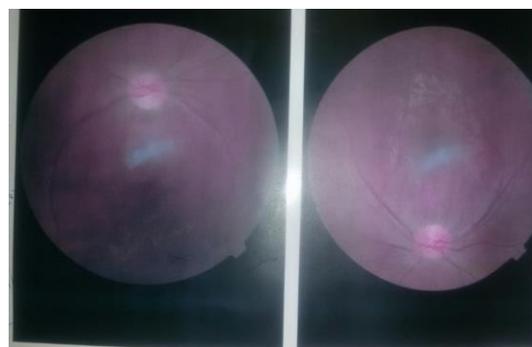


Figure 3. Fundus view: occluded vessels.

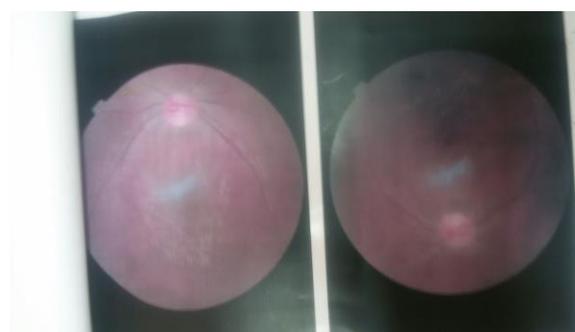


Figure 5. inferior detachment



Figure 6. Fundus view after 6sessions of intravitreal ganciclovir in 2 weeks

Discussion

Cytomegalovirus infection is common⁵ (40% - 100% worldwide is seropositive). Cytomegalovirus retinitis is the most common opportunistic viral infection among HIV patients (30%)⁶, It occurs usually as CD4 < 50/mm³⁷. It is also seen in immunocompromised patients like ALL, organ transplant, corticosteroid therapy⁸. The disease is rare among immunocompetent patients (only nine case

Table 1: Patient Lab Tests

FBS = [0]	BiL.T = 0.8	AST = 19	Na = 139	WBC = 7500
Urea = 36	biL.D = 0.2	ALT = 34	K = 4.3	EOS = 2%
Cr = 1.36	LTIV-Ab -	ALP = 179	ESR = 13	PLT = 157000
HB = 15.1	HLA-B51 (Behcat's test): negative -			

Table 2: Viral Markers

Serum CMV-PCR : Negative -
CMV-PCR-Viterous: positive +
HSV-PCR-Viterous: negative -
VZV-PCR-Viterous: negative -

reported)⁹.

The most common differential diagnosis of CMVR are VZV- Retinitis, HSV-Retinitis, toxoplasma-chorioretinitis, Behcat's disease¹⁰. Potent drugs for treatment of CMVR are Ganciclovir, Val-Ganciclovir, foscarnet, cidofovir¹¹. In the present investigation, he was as well as treated with Ganciclovir 375 mg/IV/BD 2 weeks and Ganciclovir intravitreal 200 µg + doses during 2 weeks. His visual acuity improved from 1/10 to 3/10 during treatment.

Conclusion

We Suggest in retinal vasculitis before approaching anti-inflammatory or another therapy, ophthalmologists should exclude infectious causes such as CMV retinitis.

References

1. Panel on Opportunistic Infections in HIV-Infected Adults and Adolescents. Guidelines for the prevention and treatment of opportunistic infections in HIV-infected adults and adolescents: Recommendations from the Centers for Disease Control and Prevention, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America. http://aidsinfo.nih.gov/contentfiles/lvguideline_s/adult_oi.pdf (Accessed on November 04, 2015)
2. Arevalo JF, Garcia RA, Mendoza AJ. High-dose (5000-microg) intravitreal ganciclovir combined with highly active antiretroviral therapy for cytomegalovirus retinitis in HIV-infected patients in Venezuela. *Eur J Ophthalmol.* 2005;15:610.
3. Teoh SC, Ou X, Lim TH. Intravitreal ganciclovir maintenance injection for cytomegalovirus retinitis: efficacy of a low-volume, intermediate-dose regimen. *Ophthalmology.* 2012;119:588.
4. Jabs DA, Van Natta ML, Kempen JH, et al. Characteristics of patients with cytomegalovirus retinitis in the era of highly active antiretroviral therapy. *Am J Ophthalmol.* 2002;133(1):48-61. Available at <http://www.ncbi.nlm.nih.gov/pubmed/11755839>
5. Kedhar SR, Jabs DA. Cytomegalovirus retinitis in the era of highly active antiretroviral therapy. *Herpes.* 2007;14:66-71.
6. Gupta Seema, Vemulakonda G.A. Cytomegalovirus retinitis in the absence of AIDS. *Can J Ophthalmol.* APRIL 2013; 48.
7. Miyamoto K., Hiroshiba N., Tsujikawa A. In vivo demonstration of increased leukocyte entrapment in retinal microcirculation of diabetic rats. *Invest Ophthalmol Vis Sci.* 1998;39:2190-4.
8. Saidel M.A., Berreen J., Margolis T.P. Cytomegalovirus retinitis after intravitreal triamcinolone in an immunocompetent patient. *Am J Ophthalmol.* 2005;140:1141-3.
9. Vertes D, Snyers B, DePotter. Cytomegalovirus retinitis after low-dose intravitreal triamcinolone acetone in an immunocompetent patient: a warning for the widespread use of intravitreal corticosteroids. *Int Ophthalmol* 2010;30(5):595-7.
10. Schneider EW, Elnor SG, van Kuijk FJ, et al. Chronic Retinal Necrosis: Cytomegalovirus necrotizing retinitis associated with panretinal vasculopathy in non-HIV patients. *Retina* 2013;33(9):1791-9.
11. Print: Wills Eye Manual. Sixth Edition. Section 12.9: Cytomegalovirus Retinitis. Philadelphia, PA: Lippincott Williams & Wilkins; 2012.