

Successful Treatment Bilateral Panuveitis with Multiple Systemic Infection in HIV/AIDS Patient: A Case Report

*Made Susiyanti**, *Indra Maharddhika Pambudy*

Department of Ophthalmology, Faculty of Medicine Universitas Indonesia - Cipto Mangunkusumo Hospital, Jakarta, Indonesia.

***Corresponding Author:**

Made Susiyanti, MD., PhD. Department of Ophthalmology, Faculty of Medicine Universitas Indonesia - Cipto Mangunkusumo Hospital. Jl. Kimia no. 8, Jakarta 10440, Indonesia. Email: madesusiyanti@yahoo.com.

ABSTRACT

There is an increasing number of HIV/AIDS patients in Indonesia, starting from <0.1% in 2010 to 0.4% in 2012, which warrants awareness of ocular manifestation in HIV. This might appear in 70-100% of patients with HIV. A 47 years old man came to the infection and immunology clinic with blurry vision on both eyes. He had been treated before but there was no clinical improvement. Examination showed both eyes had vitreous haziness. Visual acuity was 1/60 in both eyes with appearance of flare and cells within +3. Uveitis workup showed positive results for HIV, HSV and syphilis. Patient was given 100 mg of doxycyclin two times daily and fixed dose tablet which contains the combination of antiretroviral. Three months later, final acuity was 6/10 on the right eye and 6/18 on the left eye. Prompt diagnosis and treatment warrant good prognosis including multidisciplinary approach by ophthalmologist, clinical allergist and immunologist, and dermato-venerologist.

Keywords: *HIV/AIDS, syphilis, ocular manifestation in HIV, bilateral panuveitis.*

INTRODUCTION

Increasing number of HIV/AIDS patients in Indonesia, from <0.1% in 2010 to 0.4% in 2012, warrants awareness of ocular manifestations of HIV. Ocular manifestation of HIV might appear in 70-100% patients. In some cases ocular manifestations might be the initial presenting clinical finding in patients with HIV/AIDS.¹ Various causative agents might cause uveitis in these population, such as CMV, syphilis, toxoplasma, herpes, and tuberculosis.¹⁻³

In this case report we present a successful management of panuveitis in HIV patients. The aim of this report is to demonstrate the management of uveitis in HIV patients and highlighting the importance of prompt and accurate diagnosis as well as proper treatment.

CASE ILLUSTRATION

A 47 years old man came with complaint of blurry vision for 2 months. One year before the patient complaint of having blurry vision and floaters on his left eye. Two months before, the vision worsen accompanied with red eyes. The patient was initially treated with prednisolone acetate eye drop. There was history of promiscuity and tattoo.

Visual acuity was 1/60 in both eyes with cells +3 and flare. The vitreous was hazy, the optic nerve can not be examined in detail, exudate was found, other details was hard to be evaluated. The patient was initially assessed with panuveitis on both eyes caused by toxoplasma dd/ cytomegalovirus and AIDS without ARV treatment. The patient was planned to have

fundus photograph taken, uveitis workup. And was treated with by the attending ophthalmologist with trimetripim + sulfametoxazole 2 x 960 mg.

Complete uveitis workup was done to the patient to rule in or out the possibility of infectious disease as the cause of uveitis, and the patient return three days later with the result. Uveitis workup showed positive HIV; positive IgG and IgM for anti-HSV 2; reactive VDRL (1/512) and TPHA test (>1:5120); positive IgG for anti-CMV. CD4+ lymphocyte count was 9% and absolute count was 261 cells/mcL. Other uveitis screening workup such as tuberculin test for tuberculosis, IgM and IgG for toxoplasma, showed negative result excluding the diagnosis. Chest X-Ray showed no signs infiltrate in both lungs.

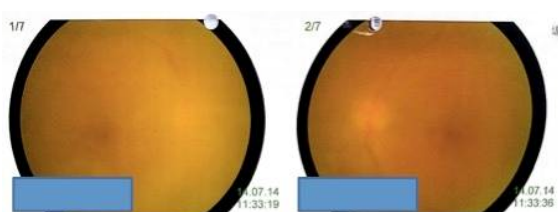


Figure 1. The first fundus photograph showing he optic nerve head was hazy and other details were hard to be evaluated

The patient was treated as syphilitic panuveitis. Because the patient was allergic to penicillin, he was treated with doxyciclin 2 x 100 mg. The HIV infection was treated with fixed dose tablet consisting zidovudine 300 mg and lamivudine 150 mg and efavirenz 600 mg once daily. Because negative result test for toxoplasma, the treatment trimetropim and sulfametoxazole was stopped.

Two weeks later the patient's acuity was 6/20 on the right eye and 6/18 on the left eye. Anterior segment was quiet. Posterior segment shows vitreous cells +1, with normal appearing optic nerve head and retina (**Figure 2**).

Three months after treatment for syphilis, the patient's visual acuity was 6/10 in the right eye and 6/18 in the left eye. Anterior segment and posterior segment were within normal limit. His final titer for VDRL and TPHA was 1:128.

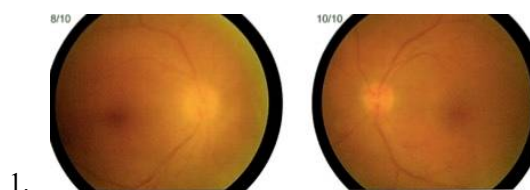


Figure 2. Second fundus and photograph taken 2 weeks later. Optic nerve head was round with clear margin, artery to venous ratio was 2/3, with cup to disc ratio 0.3-0.4, no hemorrhage or exudate can be found on both eyes.

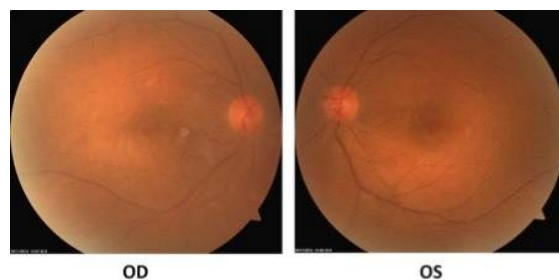


Figure 3. Final fundus photographed. Optic nerve head was round with clear margin, artery to venous ratio was 2/3, with cup to disc ratio 0.3-0.4, no hemorrhage or exudate was found.

DISCUSSION

Most common ocular manifestation in HIV/AIDS patients includes HIV retinopathy, opportunistic infections, Kaposi sarcoma, and adnexal disease, and might occur in 70-100% patients in this population.¹ Uveitis might be the first manifestations of AIDS stage of HIV infections. In patients with HIV/AIDS the course of the uveitis tend to be severe and produce more sequelae.¹⁻³

Uveitis in patient with HIV/AIDS might be caused by various etiology. Study in Taiwan in patients with uveitis as initial manifestations of AIDS, showed CMV, syphilis, and toxoplasmosis is the leading pathogen.² In HIV patients with CD4+ lymphocyte count >200/mcL, one study showed infectious uveitis is mostly caused by syphilis and herpes virus.³

The diagnosis of syphilitic uveitis requires thorough history taking, clinical findings and established through serological test. The most common finding in the fundus are multifocal chorioretinitis associated with vitritis or severe vitritis alone but, necrotizing retinitis, retinal vasculitis, exudative retinal etachment, isolated papilitis and neuroretinitis can also be found.

Panuveitis is not a rare manifestation of syphilitic uveitis, comprising of 40% cases in one study.⁴ Two type of serological test are available for syphilis classified as non-treponemal, (e.g. VDRL test), and treponemal test (e.g. TPHA, FTA-ABS or MHA-TP). Current CDC recommendation is to test patient suspected of having syphilis with treponemal test, then if positive, should be tested for non-treponemal test.^{5,6}

Because of the wide possibility of the cause of uveitis in patients with HIV, our patients was tested with various tests to confirm the causative agent. The most common viral infection of uveitis in patient with HIV is cytomegalovirus, thus testing for this disease is very important. Other important causative agents are varicella zoster virus and herpes simplex virus, which, unlike CMV that cause slowly progressive disease, causes rapidly developing and confluent retinitis. Ocular toxoplasmic retinochoroiditis is also one of the most common ocular manifestation in patients with HIV, thus testing for toxoplasma infection is very important in these cases. Infectious agents that can be commonly seen in HIV-negative uveitis patients such as syphilis and tuberculosis should also be tested since it these infection is commonly found in HIV positive patients.⁽²⁻⁴⁾

The treatment for ocular syphilis is the same with syphilis with neural involvement. CDC only recommended aqueous penicillin G 18-24 MU/d given IV as 3-4 MU every 4 hours for 10-14 days.⁵ European guidelines recommend the administration of oral doxycyclin 2 x 200 mg daily in cases of penicillin allergy, but the evidence is very weak (graded IV C).⁷ There is one case series that reports the improvement of clinical findings and visual acuity in one patients with ocular syphilis and penicillin allergy.⁸

Our patient was a 47 years old HIV positive male with remarkable risk factors for sexually transmitted diseases. Patients with HIV with history of promiscuity is at risk for other sexually transmitted infection. Examination showed dense vitritis hampering proper examination of retina, and serological test showed positive test for both treponemal and non-treponemal test for syphilis, establishing the diagnosis of

syphilitic uveitis. Test for other diseases should be done, because the dense vitritis hampers the evaluation of the retina, making the diagnosis for disease that might cause retinal necrosis worth being considered. Although test for HSV-2 IgM and IgG also showed positive result, clinical examination that support acute retinal necrosis or progressive outer retinal necrosis can not be found, thus excluding this diagnosis. But the serological test is still justifiable because on initial examination dense vitritis hamper the examination of the fundus. Because our patient was diagnosed with syphilitic uveitis in both eyes as well as HSV-2 infection, we advise to cooperate with other fields of expert in order to properly manage this patient.

Our patient was allergic to penicillin, and given doxycycline 100 mg orally twice daily for two weeks. In spite of not adhering to CDC recommendation, and low evidence based on European Guideline it is interesting to note that our patient had dramatic clinical improvement.

The prognosis of patient with ocular syphilis is favorable if treated promptly. One research study showed that the final BCVA for patients who had been treated with penicillin regimen ranging from 20/50 – 20-20 and no recurrences in 2 years.⁹ Another report stated that treatment more that 28 days since symptoms occur is a risk factor for poor prognosis.¹⁰

CONCLUSION

Prompt diagnosis and treatment warrant good prognosis in these population. Our patient came with poor visual acuity and severe inflammatory reaction, but with proper antibiotic and anti-retroviral treatment improve the visual acuity of our patient improve dramatically. The treatment involving multidisciplinary approach by ophthalmologist, clinical allergist and immunologist, and dermato-venerologist is required in these cases.

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REFERENCES

1. Moorthy RS, Rao PK, Read RW, et al. Basic and clinical science course: Intraocular inflammation and uveitis. United States of America: American Academy of Ophthalmology; 2014.
2. Tsen CL, Chen SC, Chen YS, Sheu SJ. Uveitis as an initial manifestation of acquired immunodeficiency syndrome. *Int J STD AIDS*. 2017;15(5):73-80.
3. Rose-Nussbaumer J, Goldstein DA, Thorne JE, et al. Uveitis in human immunodeficiency virus-infected persons with CD4+ T-lymphocyte count over 200 cells/mL. *Clin Exp Ophthalmol*. 2014;42(2):118-25.
4. Li JZ, Tucker JD, Lobo AM, et al. Ocular syphilis among HIV-infected individuals. *Clin Infect Dis*. 2010;51(4):468-71.
5. Davis JL. Ocular syphilis. *Curr Opin Ophthalmol*. 2014;25(6):513-8.
6. Lee SY, Cheng V, Rodger D, Rao N. Clinical and laboratory characteristics of ocular syphilis: a new face in the era of HIV co-infection. *J Ophthalmic Inflamm Infect*. 2015;5(1):56.
7. French P, Gomberg M, Janier M, et al. IUSTI: 2008 European Guidelines on the Management of Syphilis. *Int J STD AIDS*. 2009;20(5):300-9.
8. Li JZ, Tucker JD, Lobo AM, et al. Ocular syphilis among HIV-infected individuals. *Clin Infect Dis*. 2010;51(4):468-71.
9. Sahin O, Ziaei A. Clinical and laboratory characteristics of ocular syphilis, co-infection, and therapy response. *Clin Ophthalmol*. 2016;10:13-28.
10. Tsuboi M, Nishijima T, Yashiro S, et al. Prognosis of ocular syphilis in patients infected with HIV in the antiretroviral therapy era. *Sex Transm Infect*. 2016;92(8):605-10.