Ocular Syphilis in an HIV-infected Patient: the Case Report

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ABSTRACT

Objective: Ocular involvement is a rare manifestation of syphilis (6-9%), and was reported to have the prevalence of 0.6% in HIV-infected patients. We present herein ocular syphilis in a patient with newly diagnosed HIV infection.

Methods: The medical records of the patient who was hospitalized at King Chulalongkorn Memorial Hospital, Bangkok, Thailand, were reviewed.

Results: A 28-year-old man presented with subacute severe bilateral vision loss. Ocular examination revealed the visual acuity of light perception in the right eye and finger count in the left eye; anterior uveitis and severe vitritis of both eyes. Fundoscopic examination showed severe posterior placoid chorioretinitis and vasculitis around optic nerve in the left eye. Serologic tests for syphilis including chemiluminescent microparticle immunoassay and TPHA were positive, and rapid protein reagin titer was 1:128. Anti-HIV ELISA was positive, and was confirmed by the western blot test. Cerebrospinal fluid (CSF) analysis showed white blood cell of 201 cells/μL (mononuclear cell 100%), glucose of 56.5 mg/dL, and protein of 59.2 mg/dL. CSF VDRL titer was 1:8. A diagnosis of acute HIV infection accompanied with secondary syphilis was made, and the patient was treated with intravenous benzathine penicillin 24 million units daily for 2 weeks and intramuscular benzathine penicillin 2.4 million units weekly for 3 weeks. Combination antiretroviral therapy was initiated after discharge from the hospital. There was a near complete recovery of visual acuity 5 months after the treatment.

Conclusions: Syphilitic panuveitis may be the only presenting feature in patients with acute retroviral syndrome. Early diagnosis and treatment with intravenous penicillin and antiretroviral therapy will result in substantial visual recovery. (J Infect Dis Antimicrob Agents 2014;31:173-6.)

INTRODUCTION

The incidence of syphilis in the United States has increased markedly over the last decade, particularly among men who have sex with men (MSM). Although uncommon, ocular involvement is a potentially devastating clinical manifestation of syphilis. Human immunodeficiency virus (HIV) infection appears to increase the risk of ocular involvement.

Keyword: HIV, ocular syphilis, syphilitic uveitis

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syphilis. Because of the lack of pathognomonic features for ocular syphilis and its ability to occur in both immunocompetent and immunosuppressed individuals, prompt diagnosis requires a high index of suspicion. Ocular syphilis should thus be considered in men who have sex with men and HIV-infected patients presenting with unexplained visual complaints. We report herein a case of ocular syphilis in a patient with newly diagnosed HIV infection.

CASE REPORT
A 28-year-old male presented with complaints of diminution of vision and floaters in both eyes for the last two months with no other systemic complaints. The patient had a painless genital ulcer 3 months ago. He was having sex with other men. He gave a history of unprotected sex with multiple partners. The patient denied use of illicit drugs and history of blood transfusion.

Ocular examination revealed the visual acuity of light perception in the right eye and finger count in the left eye; injected conjunctiva in both eyes; punctate epithelial erosion on the right cornea; anterior uveitis with 360° posterior synechiae creating an irregular shape of the pupil of both eyes. Intraocular pressure with applanation tonometry was 8 mmHg of both eyes. Fundoscopic examination showed vitritis with severe posterior placoid chorioretinitis and vasculitis along inferior nasal branch of retinal artery (Figure 1) of both eyes. Systemic examination was unremarkable.

Laboratory analysis was notable for a normal complete blood count. Chest X-ray was normal. Anterior chamber tapping was done, and aqueous humor PCR test showed negative results for Herpes simplex-1, Herpes simplex-2, Varicella-zoster virus, Cytomegalovirus, Mycobacterium tuberculosis. Lumbar puncture revealed an opening pressure of 8 cm H2O, and cerebrospinal fluid (CSF) analysis showed white blood cell 201 cells/μL (mononuclear cell 100%), glucose of 56.5 mg/dL, and protein of 59.2 mg/dL. No microorganisms were seen by Gram stain. CSF VDRL titer was 1:8.

Figure A. and B. (close-up view) Fundus of a patient with ocular syphilis showing severe chorioretinitis and vasculitis around optic nerve area.
Subsequent results of laboratory and microbiology tests included a positive HIV ELISA and confirmatory western blot. The CD4 cell count was 156 cells/mL (11%) and the HIV RNA level was 83,019 copies/mL. A serum syphilis chemiluminescent microparticle immunoassay was positive. The serum rapid protein reagin titer was 1:128. The serum TPHA result was positive. Serum and CSF cryptococcal antigen tests were negative.

He was treated with intravenous penicillin G 24 million units daily for 14 days, and intramuscular benzathine penicillin 2.4 million units weekly for three weeks. Combination antiretroviral therapy (cART) was initiated after discharge from the hospital.

At the 5-month follow-up visit, visual acuity was 20/100 and 20/20 in the right and left eye, respectively. Anterior segment examination of both eyes was unremarkable except the presence of nuclear sclerosis of the lens in right eye. Fundoscopic examination showed rhegmatogenous retinal detachment in the right eye and chorioretinal scar with fibrous traction in the left eye. The patient had continued cART.

**DISCUSSION**

Ocular syphilis is a rare manifestation of syphilis (6-9%), and was reported to have a prevalence rate of 0.6% in HIV-infected patients. Ocular syphilis is more rapidly progressive and more extensive in HIV infected patients in comparison to HIV uninfected patients. It is usually bilateral and more common in males.

Specific treponemal serum antibody tests such as Fluorescent Treponemal Antibody (FTA)-Absorption (ABS) are sensitive and specific but do not provide information on disease activity. However, nonspecific serum antibody tests such as rapid protein reagin (RPR) and Venereal Disease Research Laboratory test (VDRL), are more useful to obtain information on disease activity and therefore for therapeutic monitoring. Up to 38% of HIV-positive individuals can be seronegative for specific treponemal serological tests despite active syphilitic disease. Ocular syphilis is not correlated with CD4 cell counts.

Central nervous system complications including ocular involvement in syphilis is more frequent in HIV-positive patients and is usually associated with CSF abnormalities (pleocytosis and/or elevated protein level) and positive CSF VDRL. Although the CSF analysis in patients with ocular syphilis does not change the treatment regimen, but helps to quantify the activity of the disease. We should perform CSF analysis in all patients with suspected syphilitic uveitis, retinitis, or optic neuritis. The first choice of treatment in ocular syphilis is intravenous high-dose penicillin, as recommended for patients with neurosyphilis, regardless of the immune status.

**CONCLUSION**

Syphilitic panuveitis may be the only presenting feature in patients with acute retroviral syndrome. Early diagnosis and treatment with intravenous penicillin and antiretroviral therapy will result in substantial visual recovery.

**References**


