

Bilateral Progressive Vision Loss in Noninfectious HIV Retinopathy without Infectious Retinitis

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Dear Editor,

Vision loss is rarely associated with noninfectious human immunodeficiency virus (HIV) retinopathy in HIV positive patients with normal CD4 counts.¹ Ophthalmologists should be aware that HIV retinopathy may be the cause of visual loss in a subset of HIV patients without infectious neuroretinitis who are otherwise stable. Electrophysiological testing has high diagnostic value in these patients.

We confronted a patient with noninfectious HIV retinopathy who had bilateral progressive vision loss, nyctalopia, dyschromatopsia, and left-sided relative afferent pupillary defect in the context of a normal fundus appearance. The diagnosis was made based upon clinical presentation and electrophysiological tests.

Our patient was a 59-year-old HIV-infected Caucasian man on highly active antiretroviral therapy (HAART) with a non-detectable viral load and normal CD4 counts of 550 cells/mm³ who presented with a three-month history of bilateral progressive vision loss, nyctalopia and dyschromatopsia. Past medical history was significant for hypertension, gallbladder resection and refractive eye surgery with a secondary enhancement procedure 11 years earlier. Family history was significant for macular degeneration.

On examination, the patient was afebrile. Best corrected visual acuity was 20/100 in the right eye (OD) and 20/70 in the left eye (OS). Pupils were 5.0 mm and 3.0 mm in dark and light, respectively with relative afferent pupillary defect (RAPD) OS and light-near dissociation in both eyes (OU). External, motility and

intraocular pressure were within normal limits. Funduscopy examination was normal with no evidence of HIV-related retinopathy (cotton wool spots, hemorrhages, microaneurysms, etc.) and cup-to-disc ratios of 0.3 OU. Visual field testing showed generalized depression OU which was more severe in the left eye (Fig. 1). Brain magnetic resonance imaging was normal except for a small pineal cyst abutting the superior colliculus. Laboratory tests were negative for neuromyelitis optica, vitamin B12 or folate deficiency, and infectious etiologies including syphilis. A chest radiograph was also normal. Flash electroretinography was normal OU but multifocal electroretinography (mfERG) indicated extinguished foveolar response OD and misshapened foveolar response OS with many perifoveal changes OU, suggestive of retinopathy (Fig. 2).

Although noninfectious HIV retinopathy has already been described, our patient is an unusual case due to the duration of visual loss, nyctalopia, and left-sided RAPD in the context of a normal fundus examination and normal CD4 count. While the observed light-near dissociation could be related to tectum compression from the pineal lesion, no other signs of dorsal midbrain syndrome were identified.

Primary HIV retinopathy, in the absence of infectious retinitis, is a diagnosis of exclusion which is rarely associated with loss of visual acuity, visual field depression and altered contrast/color sensitivity.¹⁻³ Some authors have postulated that visual dysfunction in patients with normal funduscopy appearance is the result of damage from evanescent cotton wool

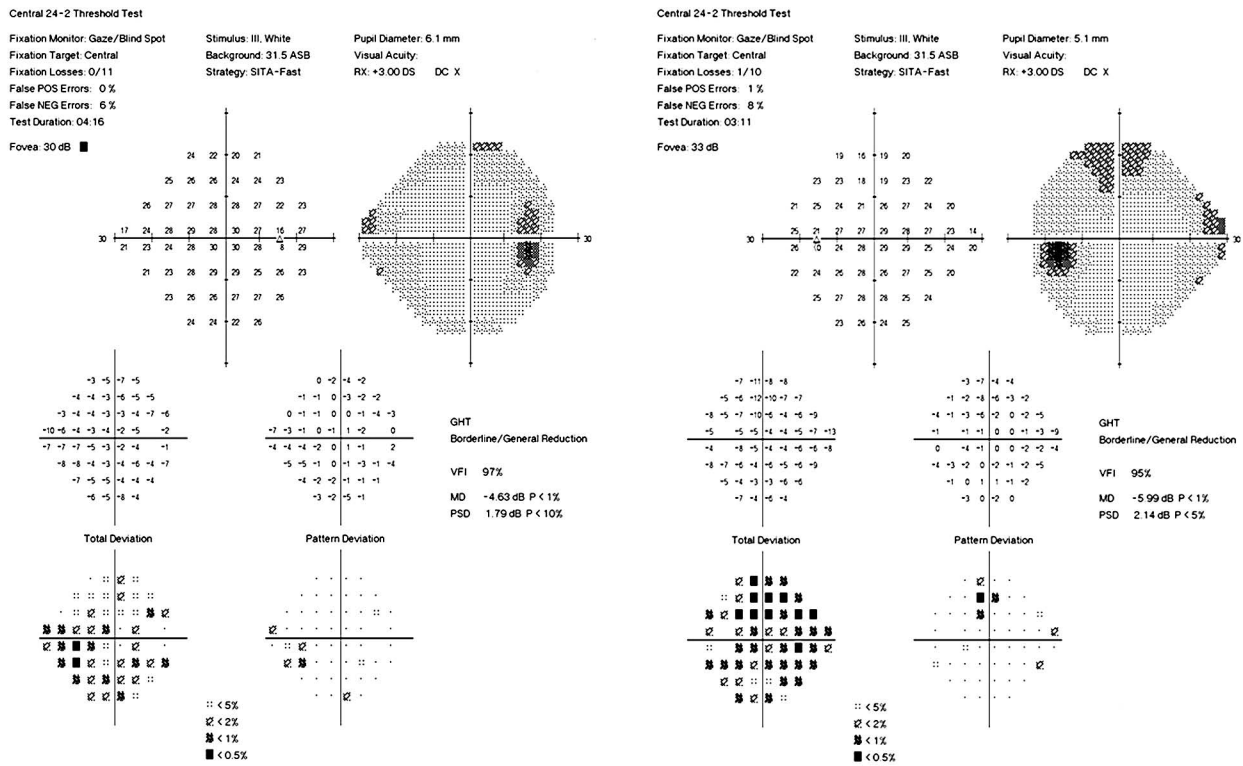


Figure 1. Visual fields showed mild generalized depression with small localized scotomas in both eyes, slightly more severe in the left eye.

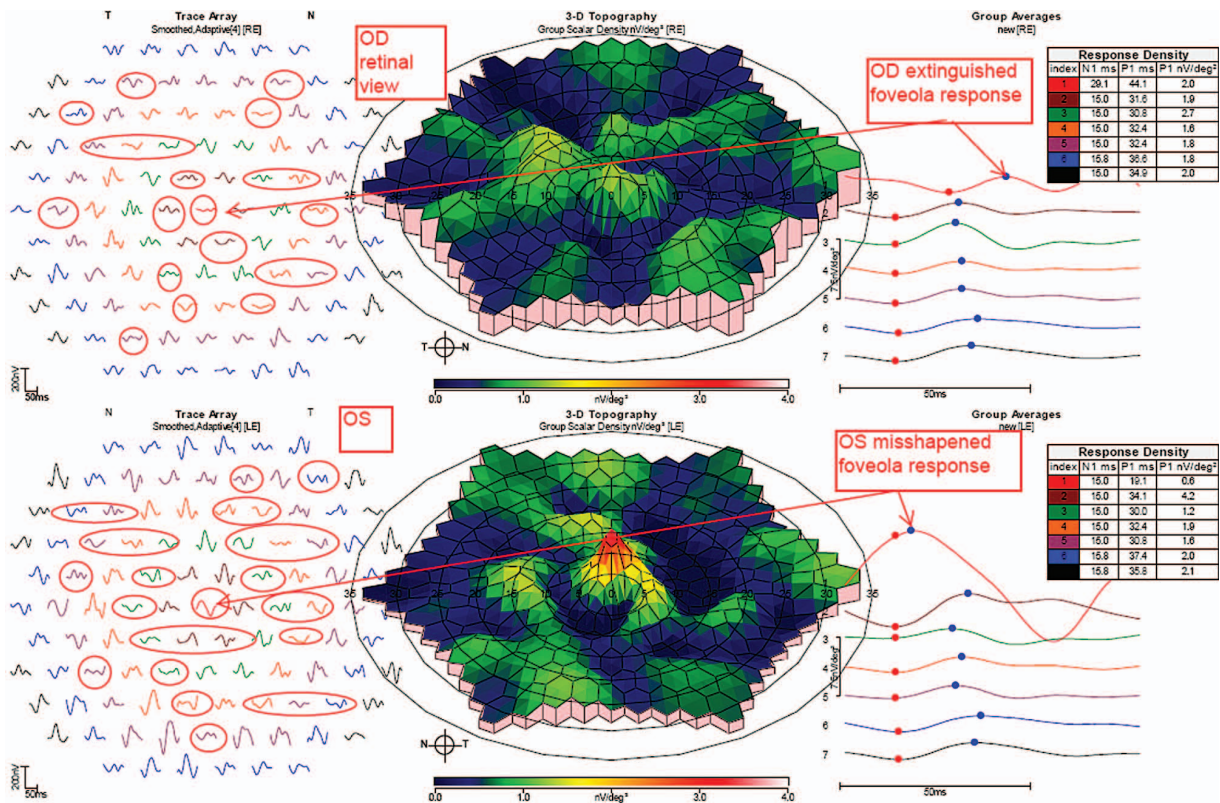


Figure 2. Multifocal electroretinography (mfERG) revealed extinguished foveolar response in the right eye (top image) and misshapened foveolar response in the left eye with many perifoveal changes in both eyes, suggestive of retinopathy.

spots which have already healed at the time of examination.¹ Previous diagnostic mfERG studies in patients with noninfectious HIV retinopathy are similar to our case.⁴

We believe that ophthalmologists should be conscious that primary HIV retinopathy might be the cause of visual loss in a subset of HIV patients without infectious neuroretinitis or other intracranial etiologies who are otherwise stable. A careful and thorough investigation for alternative etiologies of visual loss and close follow up are mandatory before the diagnosis of the condition can be made.

Conflicts of Interest

None.

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