

Abstract

Purpose: To report Ritonavir-associated retinal pigment epithelium toxicity in a patient infected with the human immunodeficiency virus (HIV) on Highly-Active Antiretroviral Therapy (HAART) including ritonavir. **Methods:** Retrospective single case report. We describe a case of gradual-onset of blurry vision in both eyes in a HIV-positive male. Visual acuity, clinical examination findings, and functional testing (electroretinogram and Goldmann perimetry) were reviewed. Diagnostic imaging including fundus photography, spectral domain optical coherence tomography (SD-OCT), fluorescein angiography (FA) and fundus autofluorescence (FAF) were assessed.

Results: 59-year-old HIV-infected male, treated with ritonavir for eight years, presented with a history of decreased night vision and peripheral field loss. Ophthalmologic examination confirmed the diagnosis of retinal toxicity. Goldmann perimetry showed areas of central and para-central scotomas. ERGs demonstrated mild to moderate photoreceptor dysfunction. Fundus examination revealed a diffuse pattern of RPE mottling in both eyes. SD-OCT confirmed the presence of choroidal thinning while FAF showed mottled hypoautofluorescence. **Conclusions:** Although ritonavir-associated retinal toxicity is clinically uncommon, the clinical features of our findings support this diagnosis. Consideration of HAART-associated retinal toxicity should be given to the differential diagnosis in HIV-positive patients with retinopathy of unclear etiology. This report also highlights the need for constant monitoring of patients using the ritonavir for early detection of possible retinal toxicity. **Abbreviated title:** Ritonavir-associated toxicity mimicking retinitis pigmentosa in a HIV infected patient on HAART **Financial disclosure:** No conflicts of interest are declared in relation to this paper.

Keywords: Highly-Active Antiretroviral Therapy, HIV, retinitis pigmentosa, ritonavir