Case Report

Rare Presentation of Ocular Toxoplasmosis

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ABSTRACT

A 23 year-old white female presented to the emergency department with sudden visual loss in her left eye. Best-corrected visual acuity was 20/20 in the right eye and 20/400 in the left eye. Fundus examination showed unilateral papillitis, including optic nerve head edema, optic disc swelling and hemorrhages with a toxoplasma retinochoroiditis at the upper of the optic nerve head. This uncommon focal active toxoplasmosis chorioretinitis lesion that appeared to involve the optic nerve as well as juxtapapillary have been reported only rarely (Rawal Medicine J 2009;34:112-114).

Key Words: Optic nerve head, toxoplasmosis, unilateral papillitis.

INTRODUCTION

Toxoplasmosis is the most common cause of posterior uveitis in immunocompetent subjects. The infection can be congenital or acquired. Ocular symptoms are variable according to the age and young children present with reduced visual acuity, strabismus, nystagmus, and leucocoria, while teenagers and adults complain of decreased vision, floaters, photophobia, pain, and hyperemia. Toxoplasmic retinochoroiditis typically affects the posterior pole, and the lesions can be solitary, multiple or satellite to a pigmented retinal scar. Active lesions present as grey-white focus of retinal necrosis with adjacent choroiditis, vasculitis, hemorrhage and vitreitis. Cicatrization occurs from the periphery towards the center, with variable pigmentary
hyperplasia. Anterior uveitis is a common finding, with mutton-fat keratic precipitates, fibrine, cells and flare, iris nodules and posterior synechiae. Atypical presentations include punctate outer retinitis, neuroretinitis, papillitis, pseudo-multiple retinochoroiditis, intraocular inflammation without retinochoroiditis, unilateral pigmentary retinopathy, Fuchs'-like anterior uveitis, scleritis and multifocal or diffuse necrotizing retinitis.

CASE REPORT

A 23 year-old white female came to the emergency department with sudden visual loss in her left eye. Best-corrected visual acuity was 20/20 in the right eye and 20/400 in the left eye. Fundus examination showed unilateral papillitis, including optic nerve head edema, optic disc swelling and hemorrhages with a toxoplasma retinochoroiditis at the upper part of the optic nerve head (Fig 1). She received treatment with pyrimethamine, sulfadiazine, folinic acid, and low dose corticosteroid. After two days best-corrected visual acuity had decreased to hand motion and the left eye displayed large areas of confluent ischemic retinitis with branch retinal vein and artery occlusion (Fig 2).

Perimetry showed lower field defect following resolution of retinal edema (Fig 3). Fluorescein angiographic characteristics consisted of choroidal hypofluorescence in the upper optic disc, black silhouette of the artery corresponding to the arterial occlusion traversing the necrotic lesion, optic disc staining and dye leakage and late leakage of the geographic white retinal lesion (Fig 4).
The diagnosis of Toxoplasmosis was based upon the ophthalmoscopic findings of white, fluffy, retinal exudative lesions with overlying vitreous inflammatory cells, and positive indirect immunofluorescent serologic tests (high levels of IgG and IgM antibodies) against Toxoplasma. There were no structural abnormalities identified in axial and sagittal T1 of MRI. On follow-up, clinical resolution of retinal whitening and thickening was noted in the affected area. Best-corrected visual acuity had improved after one month to 20/200 and the retinitis lesion resolved over a six-week period. Two months after diagnosis, she regained full visual acuity on left side with visual acuity of 20/20 and a hyperpigmented scar at the site of active retinitis was observed (Fig 5).
DISCUSSION

In English literature, only a few well documented cases of papillitis and acute toxoplasma retinochoroiditis without branch retinal artery and vein occlusion are reported. This case with focal active toxoplasmosis chorioretinitis lesion that appeared to involve the optic nerve as well as juxtapapillary has been seen uncommonly. Retina seems to be the primary site of Toxoplasma gondii infection, with secondary choroidal involvement producing retinochoroiditis.²

Optic nerve involvement in toxoplasmosis is uncommon and, when it occurs, usually presents with a white inflammatory mass on the optic disk.³ Variations in disease characteristics may be related to host, parasite, or environmental factors. The genotype of the infecting parasite appears to be an important determinant of disease severity in immunocompetent patients. Secondary prophylaxis may reduce the rate of recurrences in high-risk patients.⁴ The diagnosis of toxoplasmic chorioretinitis in immunocompetent adults usually is made by ophthalmoscopic detection of a solitary focus of active chorioretinitis adjacent to a chorioretinal scar.⁵ The involvement of the optic nerve most frequently found in ocular toxoplasmosis was optic nerve edema with a concurrent distant active lesion. The second type of lesion most often found was juxtapapillary retinochoroiditis. Involvement was monocular in most cases and the visual prognosis was favorable. Patients with toxoplasmic chorioretinitis may develop features suggestive of choroidal ischemia that can result in a transient or permanent decrease in vision. Choroidal ischemia can only be suspected clinically, and fluorescein angiography and ICG angiography are required to establish the definitive diagnosis.
REFERENCES


