Retinal Complications of Gout: A Case Report

A 62-year-old African American male had a long-standing history of chronic joint damage and tophi deposition in his hands. He complained of slowly progressive blurred vision in both eyes and metamorphopsia in the left eye.

These symptoms are associated with which of the following disease?

a) Gout
b) Conjunctivitis
c) Anterior uveitis

Introduction

Gout is an inflammatory disorder in which there is deposition of uric acid in tissues — gout results in the inflammation of various joint, especially the joints of the hand, knees, foot, etc. However, various other organs are also reported to be involved including the eye. The number of previous case reports said the association of various eye diseases such as conjunctivitis and anterior uveitis with inflammation\(^1\)\(^2\)\(^3\)\(^4\). Multiple studies report the deposition of gouty crystal in the cornea, sclera, and iris\(^5\)\(^6\). A published case report also showed the other associations between gout and elevated intraocular pressure, blurred disc margins, and possibly posterior uveitis\(^7\). However, reports of direct urate crystal deposits were not observed in the retina. In this case, the patient had macular crystals and advanced systemic gout.

Medical History

A 62-year-old African American male with a long-standing history of uncontrolled gout.

Examination and Laboratory Investigations

The best-corrected visual acuity of the patient was 20/30 in both eyes. Except for posterior and bilateral nuclear subcapsular cataracts rest of anterior examination was normal. No conjunctival or corneal pathology observed. The left macula of patient demonstrated geographic atrophy as well as subretinal, highly refractile lesions, predominately distributed at the terminal ends of retinal arterioles in the macula of the eye, which could be seen in the red-free photo. Epithelial mottling can be seen in the fundus exam of the right eye.

Treatment

The patient was given Amsler grid for the improvement of his central visual field; he was followed up in the
His retinal exam and visual acuity were found to be stable over the last 12 months; however, he reported a slight, subjective worsening of his metamorphopsia (a type of distorted vision) in the left eye.

Discussion

None of the studies showed the association of retinal lesions with gout. However, gout has often been described as an effector of the anterior segment causing conjunctivitis, uveitis and corneal deposits. Hyperlipidemia and cholesterol emboli were considered the most likely causes of these findings. But these conditions had been well controlled by statin medication previously. Also, he has no carotid artery or cardiac disease.

Additionally, retinal involvement in hyperlipidemia usually occurs in patients with familial hyperlipidemia syndromes and present at a much earlier age. In this patient, the age-related macular degeneration (ARMD) was also a consideration. However, there are no drusen visible on the basement membrane in either the photographs or the OCT. Moreover, the macular degeneration is rare in African American descent.

Additionally, at the time of presentation, the level of uric acid was normal, i.e., 5.3 mg/dL. It has been well documented that uric acid levels can be normal at the time of an attack of gout. Thus serum uric acid cannot be used as an indicator of the chronicity of these macular lesions.

Learning

Patients with gout and visual symptoms should have a thorough examination, and both the anterior and posterior segment should be carefully evaluated.

Retinopathy may be associated with chronically uncontrolled gout and patients with visual complaints should undergo a dilated examination in addition to the typical anterior segment slit-lamp exam.

References:


Exploratory, Gout, case report