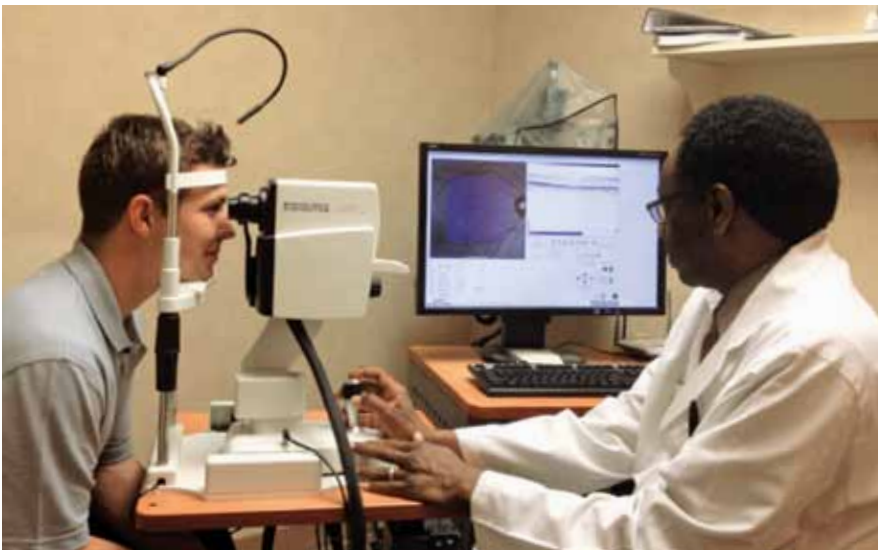


Retina Consultants, P.C.

Diseases and Surgery of the Retina, Vitreous and Uveitis

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Retinal Screening for Hydroxychloroquine (Plaquenil Toxicity)



Medications used to treat various systemic conditions can have ocular side effects. In particular, chloroquine and hydroxychloroquine (Plaquenil) are two such medications, with the potential for retinal toxicity. Given that the retinal damage from these medications is largely irreversible, screening by a retinal specialist is critical to detect early retinal toxicity to try and limit the extent of visual loss.

Recent studies suggest a higher prevalence of hydroxychloroquine retinal toxicity than previously recognized. A study by Wolfe and Marmor of 4000 patients with rheumatoid arthritis and systemic lupus erythematosus treated with hydroxychloroquine found a prevalence of 6.8/1000 patients. Factors that increase the risk of developing hydroxychloroquine associated retinal toxicity include daily dose, cumulative dose, renal or liver impairment, older age, and prior retinal disease. Specifically, a daily dose of > 6.5mg/kg (based on ideal body weight) and a cumulative dose of > 1000g of hydroxychloroquine or 460g of chloroquine are both considered risk factors for retinal toxicity. Therefore, lower daily doses do not necessarily preclude patients from developing toxicity due to the risk from cumulative dosage. There are case reports of patients developing retinal toxicity as early as 1.9 months into treatment. Additionally, retinal disease may place patients at higher risk and may mask signs of early toxicity.

The Manifestations

Ocular manifestations of hydroxychloroquine include deposits of salts within the corneal epi-thelium and retinal toxicity.

Ocular manifestations of hydroxychloroquine include deposits of salts within the corneal epithelium and retinal toxicity. The corneal deposits, known as verticillata, are asymptomatic, reversible, and not considered an indication to stop the medication.

Unlike the benign verticillata, retinal toxicity can be visually significant, is largely irreversible, and can progress after cessation of the medication.

In early hydroxychloroquine associated retinopathy, patients are often asymptomatic, despite having subtle paracentral scotomas, or areas of loss of vision or blind spots in an otherwise normal visual field. As the retinal affects progress, patients can develop a characteristic "bull's eye" maculopathy, with accompanying paracentral and central scotomas. Advanced hydroxychloroquine toxicity is seen as damage and atrophy of the retina and its supporting layer, the retinal pigment epithelium, with resultant loss of central, peripheral, and/or night vision. Therefore, screening to detect early signs of retinal toxicity is crucial to try and help patients preserve vision.

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The physicians at Retina Consultants are specialists available to assist you and your patients for this test and any other monitoring needed.

Please call to schedule an appointment at any of our 5 locations.