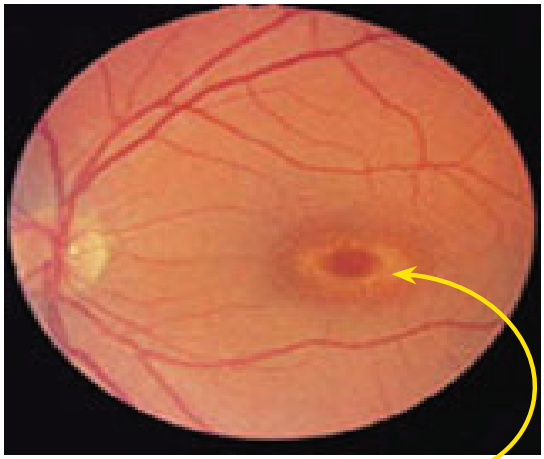
EAST BAY
Eye Specialists

Medication-related ocular toxicity

491 30th Street,
Suite 201
Oakland, CA
94609
Ph: (510) 836-2122
Fax: (510) 836-3773

Normal Retina



Hydroxychloroquine Retinopathy

A number of systemic medications have the potential to affect the eyes. Certain antibiotics used to treat tuberculosis, some heart medications, corticosteroids, and some medications specifically used to treat rheumatologic diseases like arthritis and lupus may have serious ocular side effects that can damage the eyes and cause vision loss. Some of these medications, like prednisone, cause cataracts or an increase in intraocular pressure, which can lead to glaucoma. Others, like the antibiotic ethambutol, are associated with damage to the optic nerve.

In our office, hydroxychloroquine (brand name Plaquenil) is the most common medication which requires periodic eye screening to help avoid preventable vision loss. This class of medication was initially used for the treatment and prevention of malaria. Later, rheumatologists began using it to control rheumatoid arthritis, lupus, and other connective tissue disorders. These new indications have resulted in patients taking hydroxychloroquine for prolonged periods, often years. Larger cumulative doses increase the possibility of retinal damage, which was first described in the 1950's. A characteristic "bull's eye" appearance of the central retina is a late finding; early signs of retinal toxicity are more subtle and include mottling of the pigmentation of the central retina or a blunting of the foveal light reflex. All of these findings can only be seen on careful eye examination.

Risk factors for hydroxychloroquine-related retinal toxicity include a maintenance dose greater than 6.5 mg per kilogram of body weight per day, taking the medication for more than ten years, kidney function impairment, and obesity. While there is no specific treatment for this toxicity, stopping the drug may halt its progression and preserve good vision. If more of the drug is taken, severe and irreversible vision loss can occur. Though rare, these are serious complications.

To screen for the possibility of ocular side effects, we will periodically check visual acuity, color vision, dilated retinal examination and a visual field examination, which can help reveal even subtle changes in eye function. Depending on the cumulative dose and length of therapy, we may recommend regular examinations every six to twelve months.