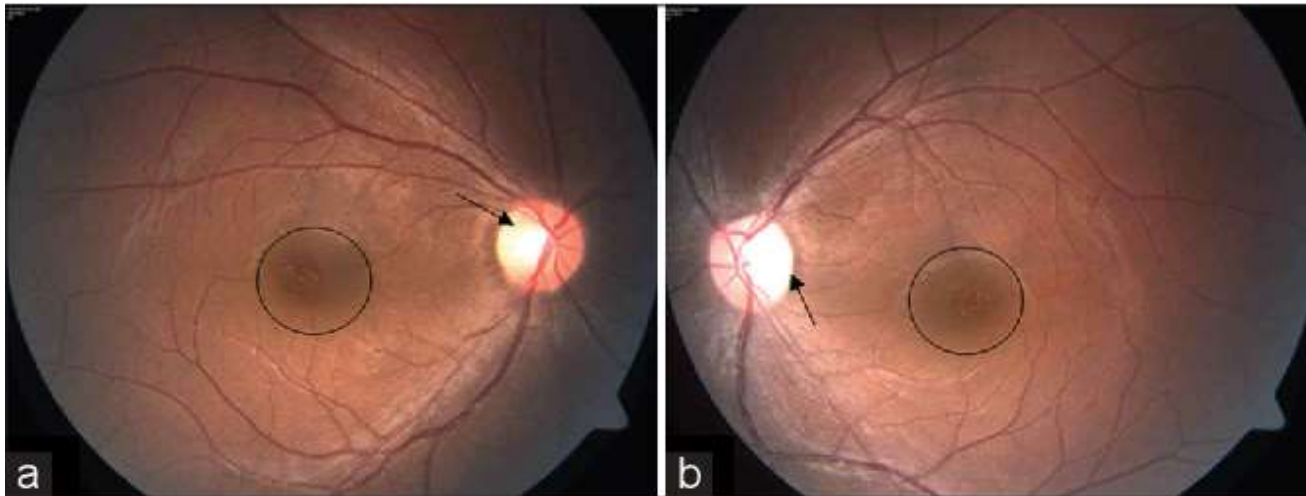
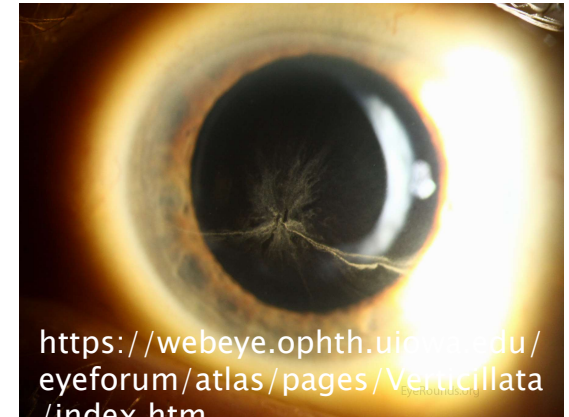


MEDICATION RELATED EYE PROBLEMS

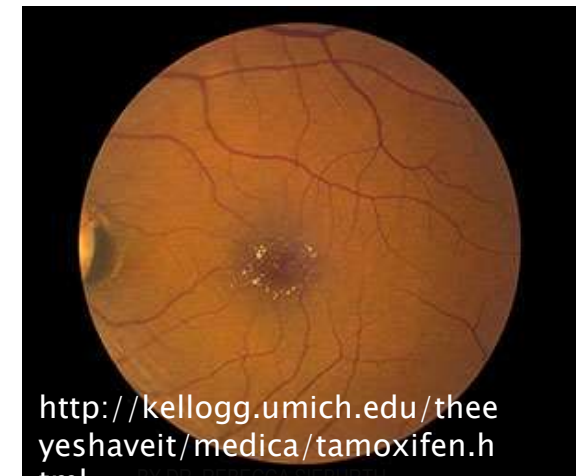
Lots!



<https://www.semanticscholar.org/paper/OPTIC-NEUROPATHY-INDUCED-BY-LOW-DOSE-OF-ETHAMBUTOL%3A-Addoor-Raju/a5d6dce8dd4dd691917a1ab9b2ef30969700b5fa>

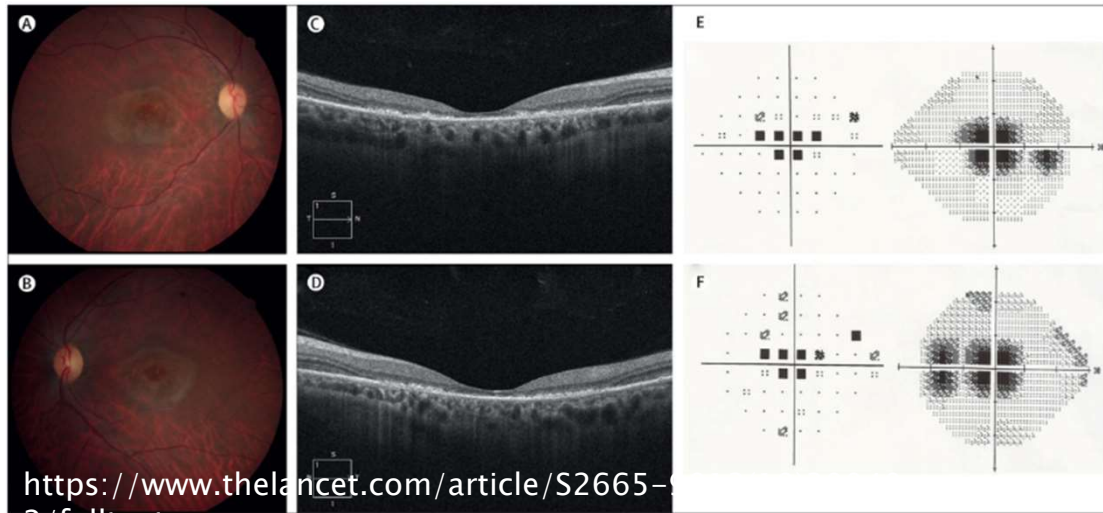


<https://webeye.ophth.uiowa.edu/eyeforum/atlas/pages/Verticillata/index.htm>



<http://kellogg.umich.edu/theeyeshaveit/medica/tamoxifen.h>

PLAQUENIL



- ❖ Toxic to RPE (retinal pigment epithelium)
- ❖ Low risk for ophthalmic side effects during first 5 years of treatment
- ❖ Risk of toxicity is decreased by limiting dose to <5.0 mg/kg real weight/day for
- ❖ Renal impairment (poorer drug excretion) and older age (theoretically less healthy RPE) increase risk of developing maculopathy
- ❖ Risk of toxicity: $<1\%$ within 5 years, 2% within 10 years, and 20% after 20 years

https://eyewiki.aaopt.org/Hydroxychloroquine_Toxicity#cite_note-

BY DR. REBECCA SIEBURTH

MEDICATION RELATED EYE PROBLEMS

Plaquenil – maculopathy

Topiramate – ciliary body effusion leading to acute angle closure

Isotretinoin / Vitamin A – intracranial hypertension causing papilledema

Flurbiprofen, Goreian (Chinese herb) – TINU

Steroids – central serous chorioretinopathy (CSCR), IOP rise

BP lowering medications – increased risk of NAION if taken before bed

MEDICATION RELATED RETINOPATHY

Disruption of the retina and retinal pigment epithelium	Vascular damage	Cystoid Macular Edema	Crystalline retinopathy	Uveitis	Miscellaneous
Chloroquine derivatives	Alkylating agents Talc	Epinephrine Nicotinic acid			
Phenothiazines	Oral contraceptives				
Pentosan polysulfate sodium	Aminoglycosides (intraocular)	Latanoprost	Talc Ritonavir	Checkpoint inhibitors BRAF inhibitors	Sulfa derivatives Cardiac glycosides
MEK inhibitors	Vancomycin (intraocular) Interferon	Antimicrotubule agents	Tamoxifen Canthaxanthine		Methanol
FGFR inhibitors	Tacrolimus	Fingolimod	Methoxyflurane	Rifabutin Cidofovir	Phosphodiesterase-5 inhibitors
Quinine sulfate	Gemcitabine	Imatinib	Nitrofurantoin Fludarabine	Latanoprost	Alkyl nitrites
Clofazimine	Methamphetamine and cocaine Ergot alkaloids Phenylpropanolamine	Glitazones Trastuzumab			ALK inhibitors
Dideoxyinosine (DDI)					
Deferoxamine					
Ritonavir					
Alkylating agents					
Corticosteroid preparations					
Potassium or sodium iodate					
Denileuken diltiox					

Adapted from Zhu I, Andreoli MT, Mitra RA, et al. Drug Toxicity of the Posterior Segment. Ryan Retina.

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https://eyewiki.aao.org/Drug_induced_maculopathy

TOXIC OPTIC NEUROPATHY

- Alcohols: Commercial alcohol, Methanol*, Ethylene glycol*
- Antibiotics: Chloramphenicol, Sulfonamides, Metronidazole, Linezolid*
- Antimalarials: Hydroxychloroquine, Chloroquine, Quinine
- Antitubercular: Isoniazid, Ethambutol*, Streptomycin
- Antiarrhythmic: Digitalis, Amiodarone*
- Anticancer: Vincristine, Methotrexate, Tamoxifen
- PDE inhibitors: Sildenafil (Increases risk of NAION)
- Heavy metals: Lead, Mercury, Thallium
- Other: Carbon Monoxide, Tobacco