

**Background:** Ezetimibe is a lipid lowering agent that selectively inhibits intestinal cholesterol absorption. It is clinically indicated in patients with hypercholesterolemia in combination with statin or as monotherapy in patients who are contraindicated or intolerant to statin. Musculoskeletal and gastrointestinal symptoms are the commonly reported adverse drug reactions for ezetimibe monotherapy, but to date there are no published reports of ezetimibe induced visual disorders. Number of medications (including ezetimibe) associated with secondary cone-rod dystrophies (CRDs) have been reported in the Rare Disease Hub, but its mechanism of action is not well understood. **Clinical case:** A 55 year-old Caucasian woman with a 2 years history of increasing concentric visual field loss, blurred vision, photophobia, nyctalopia (loss of night vision), dyschromatopsia (colour blindness), and new visual migraines with bright aura after commencing ezetimibe and montelukast therapy around the same time. She had a background of asthma, rosacea, and hypercholesterolemia. She does not report drug related hypersensitivity reactions other than statin intolerance and is otherwise medically well with no family history of retinal dystrophy. On investigation, pertinent positives included repeated visual field constriction on Humphrey visual fields 30°2, and significantly impaired colour vision bilaterally (R1/17, L1/17) on Ishihara charts not previously reported. MRI of orbits and brain was unremarkable. Retinal examination and electrophysiology testing were completely normal for all test conditions. Baseline blood tests including FBC, LFT, EUC, CRP, ESR, TSH, ACE, and fasting glucose were normal. Autoimmune screens including anti-retinal antibodies, ENA, ANA, anti-dsDNA, serum electrophoresis, complements, lupus anti-coagulants, and thrombophilia studies were all within normal limits. Recent abdominal US, CXR and mammography were normal. Work up for carcinoma associated retinopathy and was negative. Visual symptoms completely resolved after cessation of both ezetimibe and montelukast therapy. Rechallenge on montelukast therapy alone did not result in recurrent visual field constrictions. Clinical review after 3 months demonstrated normalization of the concentric visual field loss on Humphrey field analyzer. **Conclusion:** This is the first case demonstrating association between ezetimibe and CRD related visual impairments. There is literature reporting multiple different medications causing cone-rod dystrophy. This includes commonly used pharmacotherapies to treat diabetes, such as sitagliptin/metformin combinations. Clinical course of CRDs is rapid and can lead to early legal blindness if left untreated. Therefore, we emphasise the importance of considering commonly used medications as a cause of patient symptoms in unexplained clinical presentations, and to systematically go through the options. Reference: (1) Cone-rod dystrophy. Rare diseases InfoHub. <https://rarediseases.oscar.ncsu.edu/disease/cone-rod-dystrophy/resources/>

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### Concentric Reversible Visual Field Loss, Nyctalopia and Dyschromatopsia With Ezetimibe Therapy - A Case Report

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