Management of achromatopsia: Prescribe or not: A case report

Achromatopsia is a congenital, inherited visual disorder in which cone function is either absent or reduced. Its clinical characteristics included reduced visual acuity, photophobia, significant refractive error and reduced or complete loss of colour discrimination.

A 34-year-old accountant had achromatopsia diagnosed as child. He reported reduced visual acuity, color vision deficiency and photophobia. He wore Corning 527X filter to reduce his light sensitivity currently. His corrected visual acuity was 10/100 and 10/80- in his both eyes with his spectacle and contact lenses respectively.

With the use of tinted red prosthetic contact lens in his right eye, he found clear vision at distance subjectively while only minimal improvement in visual acuity was found with the new contact lens clinically. Colour vision was test before and after the use of the tinted contact lenses and no conclusive improvement in colour vision was found with the use of D-15 and 100-Hue colour vision tests.

Tinted contact lenses have been used to relieve symptoms of photophobia in patients with achromatopsia possibly due to attenuate light reaching the retina. In order to optimize the function of tinted contact lenses, the tinted zone of the contact lenses should cover and well beyond the papillary margin under dim and bright condition.

Centrally tinted contact lenses should be prescribed if the patient found significant improvements in visual comfort even though the improvement of visual acuity was minimal clinically. However, extra care should be needed to minimize the contact lens complications who suffered from achromatopsia.