

Review Article

Color vision deficiency

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Abstract

Color vision deficiency (CVD) is a defect of vision with disability to distinguish colors. Color vision deficiency can be divided into the two categories, congenital and acquired. Congenital color vision deficiency divided into anomalous trichromacy, dichromacy and monochromacy. The most common congenital CVD was deuteranomalous that mode of inheritance is X linked recessive occurring mostly in males. Acquired CVD can occur as a direct result of illness or any related medicine. Color perception changes in acquired CVD may be secondary to primary ocular disease, drug side effect, or serious systemic disease such as diabetes. Dystrophy of cone, types of maculopathy, crystalline lens changes associated with aging, diabetes, glaucoma, optic nerve diseases and traumatic brain injuries can cause CVD. For acquired CVD, type of defect may not be easy to classify; nevertheless, predominantly is tritanopia and type and severity of the defect fluctuates during of disease. It has been suggested that human evolution to industrialized civilization has led to an increased prevalence of CVD in most population. An acquired CVD can reflect a deficiency in color information processing at anywhere along the related visual pathway, from the photoreceptors to the cortex. Sometimes, assessment of color vision can be helpful to detect a visual impairment in early stages.

Keywords: Color vision deficiency, Anomalous trichromacy, Dichromacy, Monochromacy

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