



Orange Tinted Contact Lenses for Light Induced Migraines: A Case Report



Daniel Deligio, OD, FAAO

Background

An 18-year-old white female presented for evaluation of weekly migraines triggered by fluorescent lighting with associated vertigo and syncope that have occurred since she was 13. She had been previously evaluated by neurology and cardiology with no known cause of her migraines. She reported taking amitriptyline 25mg and propranolol 40mg, with limited success.

The patient was interested in tinted contact lenses instead of spectacles as she played competitive basketball.

Figure 1



Figure 2

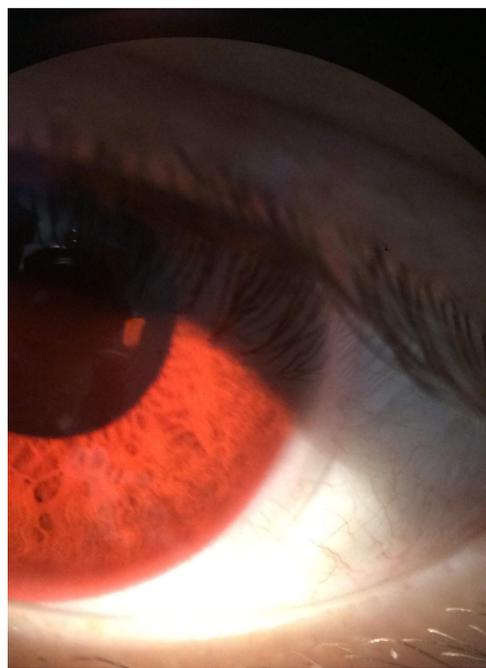
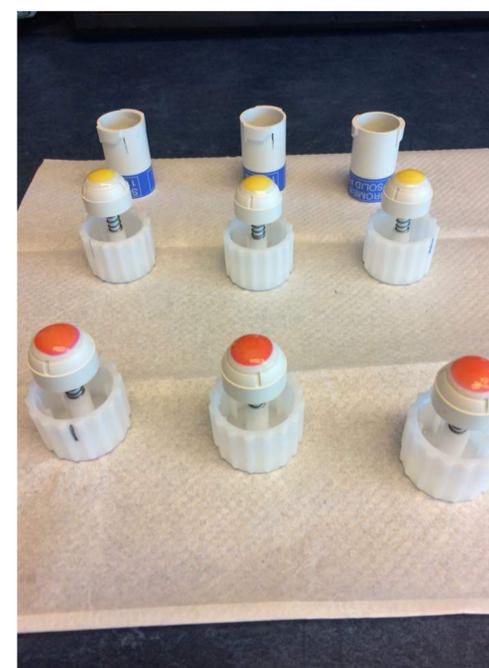


Figure 3



Case Description

Entering unaided VAs were 20/20- OD and 20/20- OS. Pupils, CVF, EOMs, stereopsis, and color vision were all unremarkable. Refraction revealed minor myopic refractive error OU. Slit lamp exam, DFE, and IOP were all within normal limits.

The patient was fit OU with CooperVision Proclear 8.6/14.2/-0.25 sph (Victor, NY) and tinted in blue, black, and brown colors (11.5mm occluder). The contact lenses were tinted using an in-office tinting system, Spectratint by Nexgen Optical (Greatworth, UK). Upon follow up, the patient did not note any improvement in symptoms with any of the colors, therefore red and orange colors were trialed.

After many color modifications, the patient reported complete resolution of her symptoms with orange tinted contact lenses. A year supply of tinted contact lenses were fabricated and the patient has had no report of symptoms after 6 months of treatment.

Discussion

Patients who suffer from light induced migraines may find success with tinted spectacles¹, however, tinted spectacles may not be the best option for every patient. Custom colors can be created and impregnated into soft contact lenses for those unsuccessful with tinted glasses.

There is limited literature regarding which colors work best to improve symptoms in migraine patients. Some studies have described the use of a colorimeter to help identify the optimal color.² This eliminates creating unnecessary colors and avoids the “trial and error” method. One case report found success in a similar patient with blue tinted contact lenses, which is why blue contact lenses were trialed first in this patient.³ However, this patient preferred orange tinted contact lenses to help improve her symptoms (Figure 1 and Figure 2). This custom color was created using a mixture of yellow and red dyes (Figure 3).

Colored contact lenses may be used to treat other ocular disorders including photophobia, amblyopia and color vision deficiency management.⁴

Conclusion

Tinting soft contact lenses may be considered a treatment option for light induced migraines in those unsuccessful with traditional methods. Patients should be thoroughly evaluated for a systemic or other causes to avoid masking underlying conditions prior to attempting tinted contact lenses.

This patient was trialed with darker colors, but found them unsuccessful. This case report adds to the current literature and offers another potential color to explore when treating light induced migraines with tinted contact lenses.

References

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4. Sekar P, Dixon PJ, Chauhan A. Pigment contact lenses for managing ocular disorders. *Int J Pharm.* 2018 Nov 19;555:184-197.