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Original Research Paper

Ophthalomology

A CASE REPORT OF FOVEAL BURN WITH FOVEAL CYST DUE TO DISCO LASER EXPOSURE TREATED WITH TOPICAL NSAIDS AND STEROIDS

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ABSTRACT A 29y/o male, came with complain of sudden painless blurring of vision in Right eye(RE) following exposure to disco laser 3-4 days ago. Anterior segment evaluation in BES was WNL. Posterior segment evaluation by indirect ophthalmoscopy, fundus photo and OCT revealed Foveal burn with Foveal cyst and damage to Retinal Pigment Epithelium(RPE). Patient was prescribed Topical NSAIDs 3 times a day, Oral Steroids and Tablet Vitamin C 500mg 3 times a day.

KEYWORDS : Foveal burn, Disco laser, Topical NSAIDs

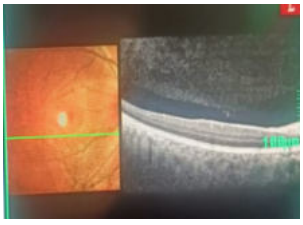
INTRODUCTION

Young adults are commonly exposed to lasers from various sources in day-to-day life. Laser related factors responsible for foveal damage include wavelength, pulse duration and energy of the beam. Accidental exposure to the laser may result in visual impairment from retinal injury. Laser-induced damages to the macula include outer retinal disruption, foveal hemorrhage, macular edema, epiretinal membrane, full thickness macular hole, etc. This is a case report of a patient who underwent a Foveal burn with Foveal cyst due to inadvertent exposure to disco laser. Such cases can be managed well conservatively with topical corticosteroids and NSAIDs alone.

Case Study

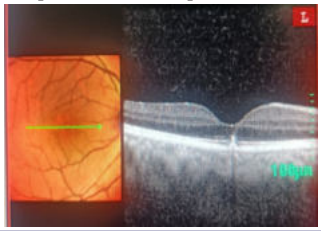
A 29y/o male, came with complain of sudden painless blurring of vision in Right eye(RE) following exposure to disco laser 3-4 days ago. On examination, vision in RE was 6/18 and LE was 6/6. Autorefractometer reading was as follows: RE -0.25DS and LE 0.00. Anterior segment evaluation in BES was WNL. Posterior segment evaluation by indirect ophthalmoscopy, fundus photo and OCT revealed Foveal burn with Foveal cyst and damage to Retinal Pigment Epithelium(RPE).

Following is the Fundus Photo and OCT picture at presentation:



Patient was prescribed Topical NSAIDs(Eyedrop Nepafenac) 3 times a day, Oral Steroids and Tablet Vitamin C 500mg 3 times a day. Patient was followed up after 7 days and vision in RE had improved to 6/6.

This is the Fundus photo and OCT picture on follow up:



CONCLUSION

As a rare condition, laser burns around the foveal region seem to have the chance of RPE and outer retinal recovery over time. Although the final visual outcome is determined by the severity and location of the injury, in most of the similar conditions, these accidental foveal laser burns lead to permanent severe visual impairment. The need to educate on and emphasize foveal safety for those exposed to lasers is necessary. and well-trained physicians must do these procedures.

Histologic studies have revealed that in a barely visible burn, the RPE and photoreceptor cells can migrate toward the center of the lesion, resulting in a decrease in the burn size over time. A reduction in the size of the outer retinal disruption zone and migration of RPE and photoreceptors to this affected zone of the fovea may be the cause of visual recovery, as presented in follow-up evaluations of our patient.

REFERENCES:

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