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It Popped!

Spontaneous Corneal Bleeding Following Increased Intraocular Pressure in a Phthisical Eye

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INTRODUCTION

Narrow angle glaucoma is a type of glaucoma that most commonly affects the Asian and Inuit population, females more often than males, older patients, hyperopic patients, and patients with shallow anterior chambers[1]. Patients who experience angle closure typically experience symptoms of: nausea and vomiting, blurry and distorted vision in the affected eye, and headache. If not treated early in the progression of the disease, blindness can result. Our patient presented for a prosthetic contact lens fit for cosmesis in her blind eye, but a more pressing finding in her anterior segment halted the process.

CASE REPORT

64-year-old Asian female with narrow angle glaucoma and history of intermittent angle closure attacks status-post laser peripheral iridotomy OU presents for prosthetic contact lens follow-up OS. At this visit, she complained of ocular pain with and without prosthetic contact lens wear. The patient has vision remaining in the right eye only and she was prescribed a prosthetic soft contact lens in her phthsical eye to mask a dense corneal scar with overlying band-keratopathy OS. Her referring provider had prescribed PredForte 1% 1gt BID OS to address pain in her longstanding blind eye. Superior and inferior intrastromal corneal neovascularization was noted peripheral to a dense, central corneal scar.

Upon slit lamp evaluation, spontaneous intracorneal bleeding was noted within a nest of pre-existing neovascularization in the patient's superior cornea (pictured below). With the asymmetrical IOP, we suspected that the increased intraocular pressure in the left eye may have played a role in our observation.

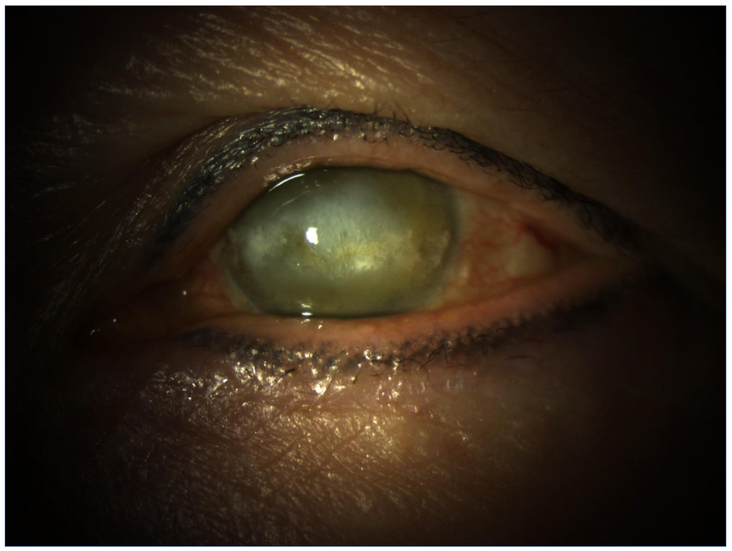

Figure 1: Anterior segment photography

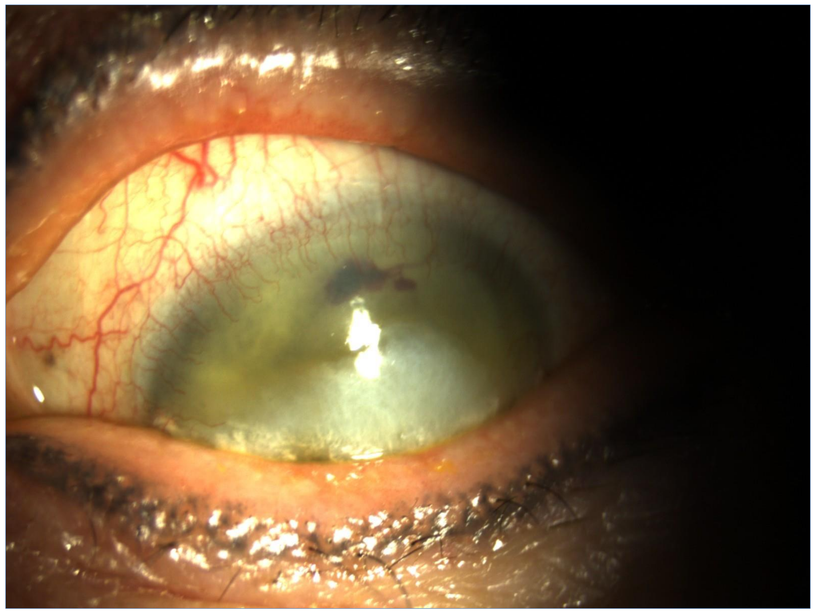

Figure 2: Anterior segment photography

EXAM FINDINGS

	OD	OS
BCVA	**20/20**	**NLP**
Eyelids	capped meibomian glands, tattoo eyeliner	capped meibomian glands, tattoo eyeliner
Sclera/Conjunctiva	white and quiet	multiple concretions within inferior palpebral conjunctiva
Cornea	trace nasal superficial punctate keratitis	full-thickness opacification with overlying band keratopathy and diffuse superficial punctate keratitis, intrastromal neovascularization superior/inferior
Iris	LPI patent 2:00	No view
Anterior Chamber	Shallow, quiet	No view
Lens	nuclear sclerosis 1+	No View
Intraocular Pressure	**12mmHg**	**19mmHg (32mm Hg at 1-week follow-up)**

CONTACT LENS FITTING

When initiating contact lens fitting OS on the patient, corneal topography data could not be obtained due to the overlying band-keratopathy yielding an irregular and uneven corneal surface. Diagnostic fitting was implemented, and special attention was given to watch for corneal desiccation at follow-up visits due to the uneven anterior surface.

Power	Brand	BC/SAG	Diameter	Material	Design
Plano sph	Alden HP	8.6	14.50	HP 49 Hioxifilcon B	Walnut #5 3.00 BP 11.00

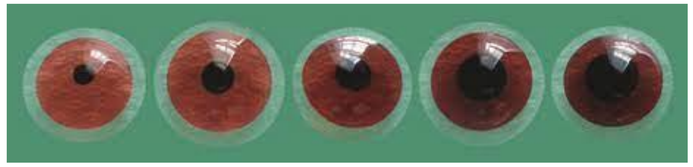

Figure 3: Bausch & Lomb Alden Optical HP Prosthetic Lenses

CONCLUSIONS

Repeated inflammation and trauma to the eye can cause corneal scarring and resulting neovascularization. When that factor is coupled with intermittent angle closure attacks and subsequent increases in IOP, the fragile environment under the neovascularization can further decompensate. The increased intraocular pressure may have been the result of a steroid response and/or the development of neovascular glaucoma. While visual acuity is often an important sign of ocular health, when not measurable, special consideration and attention must be given to symptoms, biomicroscopic signs, and biometric measurements.

Symptoms of increased intraocular pressure include pressure behind and around the eye, ocular pain, and sharp discomfort, as well as nausea and vomiting.
Patients with seeing eyes will typically experience reduced vision or colorful rings of light, but for a phthisical eye, these symptoms are largely absent. When viewing the patients' eyes, the biomicroscopic signs are largely not pathognomonic. The patients' eyes will likely be red and teary, but without other biomicroscopic measurements, it will be difficult to definitively diagnose the patient as having acute angle closure. Biomicroscopic measurements to look for with angle closure attacks specifically are largely diagnosed based on gonioscopy and measurement of intraocular pressure, but gonioscopy was unable to be performed on the patient due to her severely opacified cornea.

Clinically, this case was an important reminder to ensure comprehensive care for all eyes – including phthsical eyes with a cosmetic goal. While the patient came in primarily for a prosthetic contact lens fit for cosmesis, careful biomicroscopic examination of anterior segment ocular health is always necessary to ensure comprehensive eyecare is provided to all patients.

REFERENCES

1. CHANDLER, PAUL A. "Narrow-angle glaucoma." AMA archives of ophthalmology 47.6 (1952): 695-716.
2. Donnenfeld, Eric D., et al. "Contact lens-related deep stromal intracorneal hemorrhage." Ophthalmology 98.12 (1991): 1793-1796.