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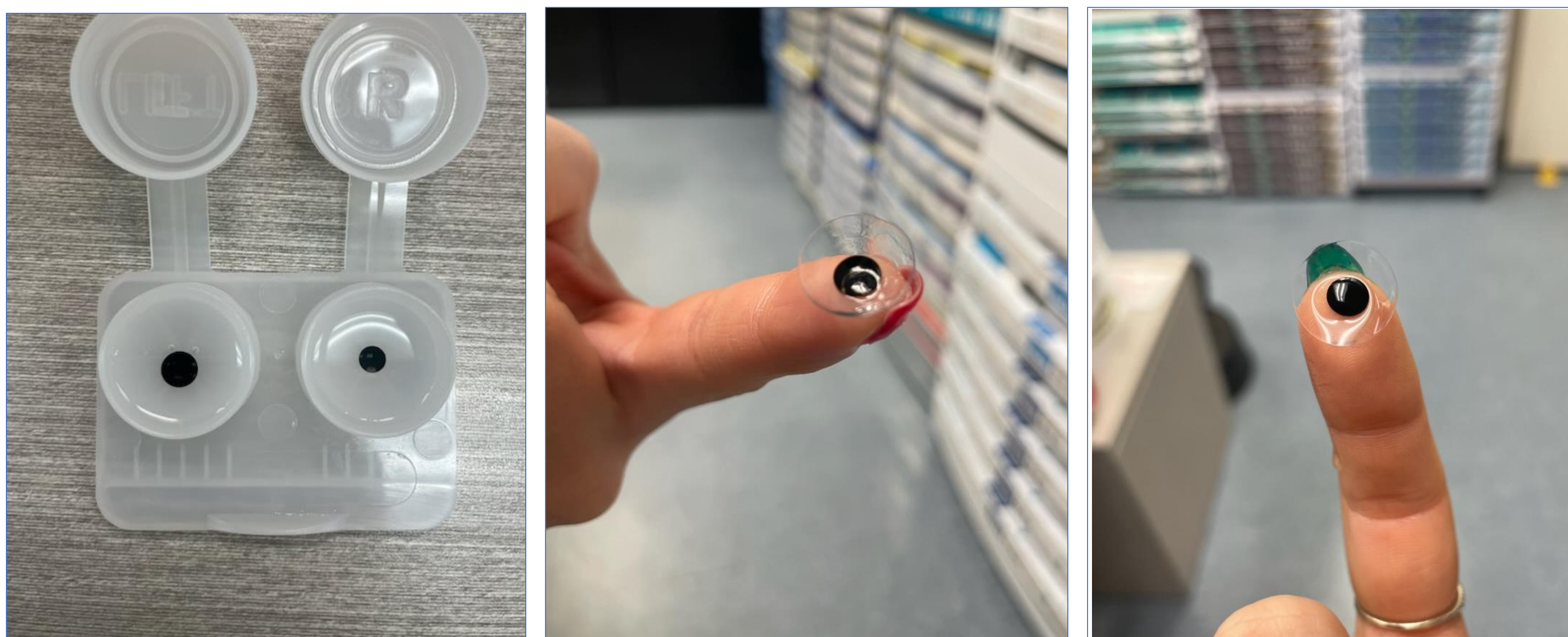
INTRODUCTION

Cytomegalovirus (CMV) retinitis is an AIDS-related opportunistic infection associated with CD4 counts of <50 or severe systemic immunosuppression. It is a retinal infection that affects mainly the posterior pole along the vessels, with a very prominent “ketchup and mayo” appearance of retinal hemorrhaging and whitening¹. CMV retinitis patients are started on high dose induction therapy, followed by maintenance therapy until CD4 counts increase, HAART is therapeutic, and the CMV retinitis is stable¹. While CMV retinitis has become much less common with HAART therapy, there must be consideration for the sequelae when the immune response is rapidly increased. Immune response uveitis (IRU) is one of the possible sequelae following a quickly rejuvenated immune response when taking HAART². IRU is associated with sight threatening inflammation².

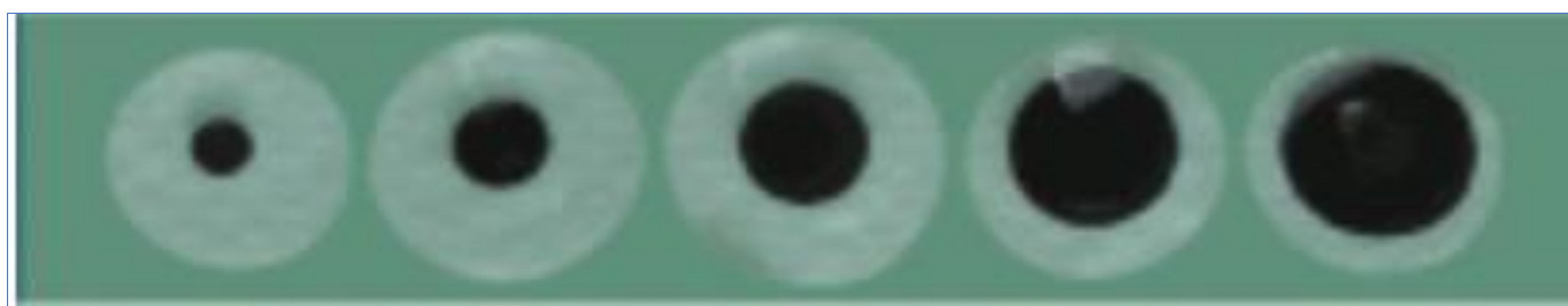
IMMUNE-RESPONSE UVEITIS FINDINGS

- Complaint of floaters and moderate vision loss (20/40 to 20/200)
- Cataract, as well as post-operative complications including posterior synechiae and inflammatory deposits on implanted IOL
- Cystoid macular edema
- Epiretinal membrane formation (5-6x more likely than non IRU patient)⁴
- Vitritis
- Frosted branch angiitis
- Papillitis
- Neovascularization of the disc

PUPIL-ONLY PROSTHETIC SOFT CONTACT LENSES



L: 4 mm and R: 3 mm Black Pupil Prosthetic Soft Lenses 4mm Black Pupil Prosthetic Soft Lens (Side View) 4mm Black Pupil Prosthetic Soft Lens (Front View)



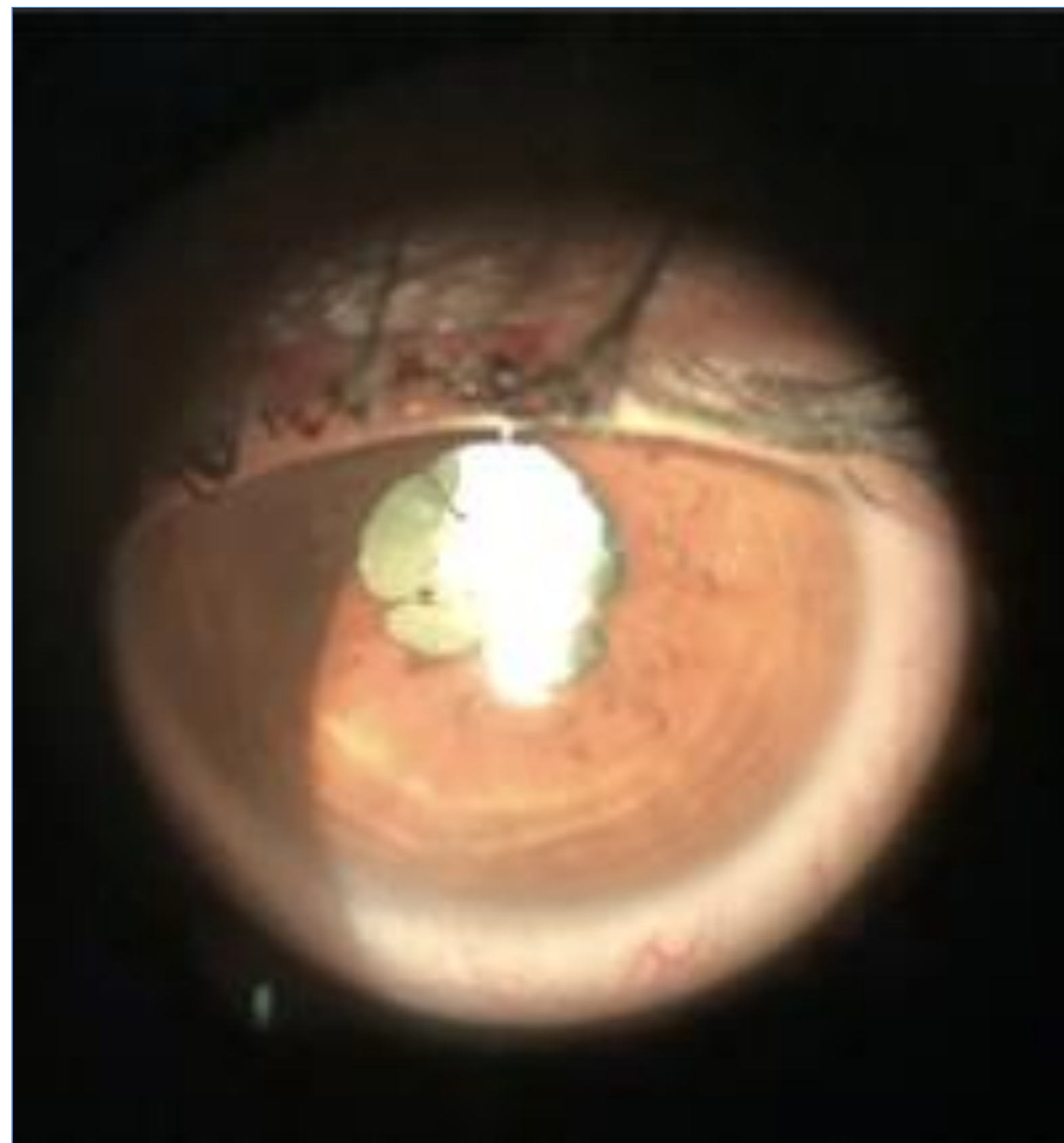
From: <https://www.bauschsvp.com/lenses/alden-optical-enhancement-tints-and-hp-prosthetics/>

CASE REPORT

A 35-year-old transgender male to female patient was referred for a prosthetic lens fitting status-post CMV retinitis and assumed immune response uveitis OS. The patient was diagnosed with HIV in 2012 and developed CMV retinitis in 2016. The patient was taking Symtuza (HAART), Fludrocortisone 0.1 mg, and oral Prednisone 15 mg and reported her CD4 count was now 575 cells/mm³ (normal reference range is 500-1500 cell/mm³)³. Visual acuity was 20/20- OD and NLP OS. The patients’ main concerns were solely cosmetic. The patient was fit in a pupil-only prosthetic soft lens, with a 4 mm black pupil matching the pupil size of the unaffected eye in bright light.

	OD	OS
Lid	Normal	Normal
Conjunctiva	White and quiet	White and quiet
Cornea	Clear	Clear
Anterior Chamber	Deep and quiet	(-) cells/flare
Iris	Flat and intact	Irregular, non-reactive pupil, see photo for location of posterior synechiae
Lens	Clear	Opacification, (-) view

WITHOUT PROSTHETIC LENS



3.0 MM BLACK PUPIL



FINAL CONTACT LENS PARAMETERS				
Power	Base curve	Diameter	Pupil Diameter	Material
-3.00	8.10	14.00	4.0 mm	hioxifilcon B 49% polymacon 38%

PUPIL DIAMETERS TRIALED

5.0 MM BLACK PUPIL



4.5 MM BLACK PUPIL



4.0 MM BLACK PUPIL



CONCLUSIONS

Pupil only prosthetic soft contact lenses are not commonly used in practice, as it is rare to have pathology or trauma only impact the lens or pupillary margin and not the iris. Previous applications pertain mostly to diplopia. In the case of the patient’s leukocoria secondary to immune response uveitis, the black pupil-only prosthetic provided a perfect match to the patient’s unaffected eye.

Pupil only prosthetic soft lenses can be considered in all patients with permanent leukocoria and posterior synechiae as the diameter of the pupil can be adjusted to both cover pathology and match the unaffected eye without having the difficult burden of matching unique iris parameters.

REFERENCES

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