

BACKGROUND

When it comes to vision correction, there are a multitude of situations that call for specialty lenses. For instance, GP and scleral lenses can be crucial for optimizing visual acuity in the presence of corneal irregularities or scarring. Additionally, prosthetic lenses provide not only functional vision but also cosmetic enhancement. Patients with a history of ocular trauma often present unique and challenging cases. Ocular trauma can result in a range of complications such as corneal irregularities, aniridia, aphakia, and other structural changes, requiring a specialized approach to lens fitting

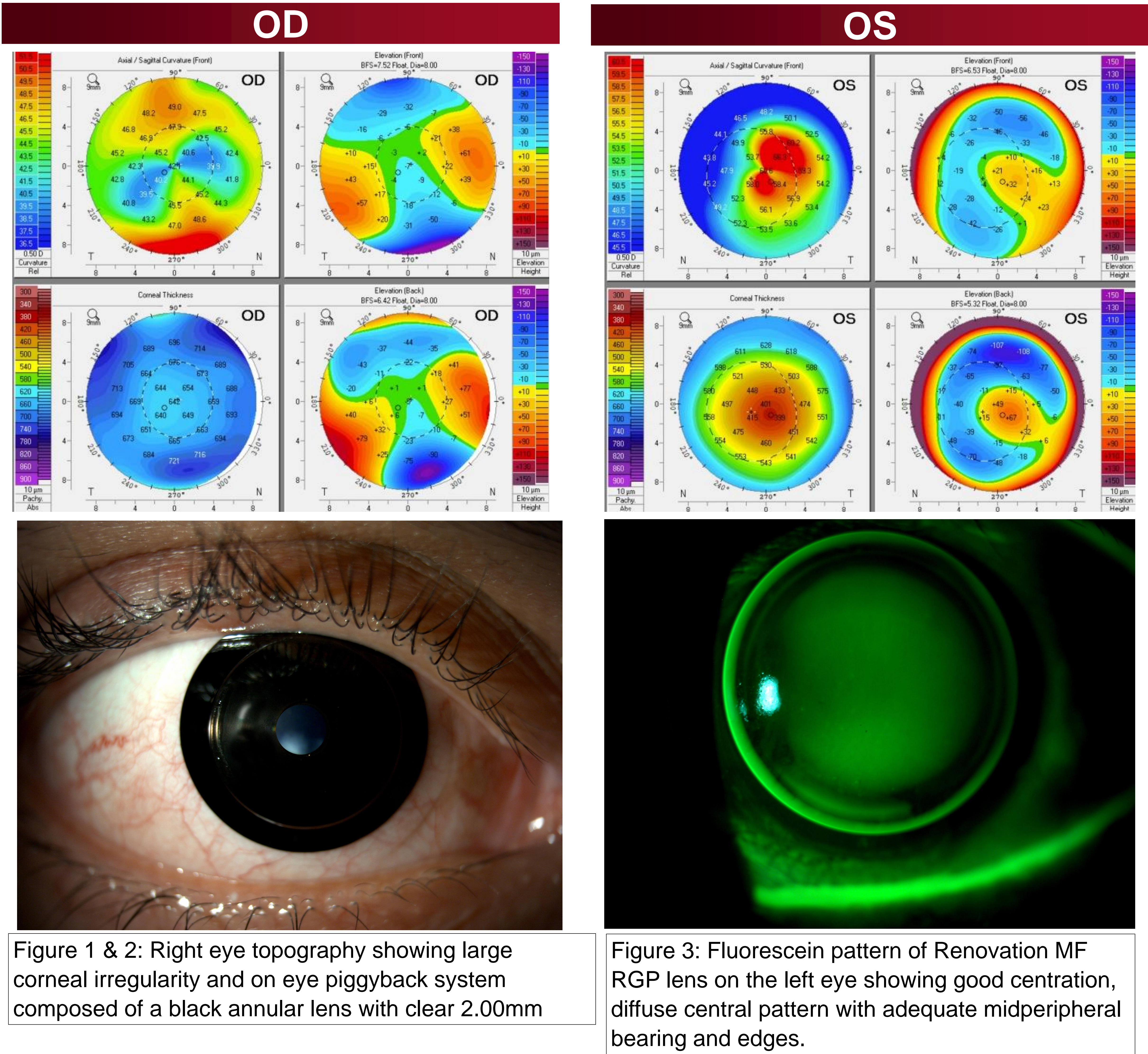
CASE DESCRIPTION

A 55 yo Hispanic male presented with history of ocular trauma in 2019 resulting in aniridia and aphakia in the right eye and pseudophakia in the left eye. The patient reported issues with glare, monocular diplopia, and non-functional VA. Additionally, the patient was diagnosed with Keratoconus in 2021 after inability to improve BCVA with glasses and soft CLs, and confirmation with tomography scans. The patient had been fitted previously with a soft prosthetic lens with black backing in the right eye to address glare, and a GP lens in the left eye to improve vision. However, the patient reported persistent glare and suboptimal vision two years later, prompting a reevaluation and refitting.

METHODS

The current approach involved fitting the right eye with an annular lens in a piggyback system, along with a GP lens, to mitigate glare and diplopia. In the left eye, a multifocal GP lens was utilized to enhance near vision while achieving improved distance vision. Ultimately, vision was significantly improved in both eyes, reaching 20/20 VA OD, with minimal disturbance, 20/30 VA OS, and 20/20 OU without the need for additional reading glasses.

Lens Parameters				
	Design	BC	Diam	Pwr
OD GP	Rose K2	6.75 mm	9.7 mm	+2.75
OD Soft	Black Annular w/ 2.0 mm clear pupil	8.16 mm	14.5 mm	+12.25/+12.00
OS	Renovation MF	7.80 mm	9.7 mm	-1.50/ ADD +2.50 Center distance zone 3.7 mm



DISCUSSION

The challenges of fitting this patient with contact lenses that would meet his many ocular needs, particularly the right eye, lied primarily in attaining stability and optimal fit of the GP lens over the soft lens. Achieving this required multiple adjustments in the lens edges. For the right eye, it was ultimately decided to not incorporate a MF design as the main goal was to attain optimal distance vision and comfort with the dual lens system. The soft lens component was used to our advantage as the majority of the prescription was taken into account with this lens in order to avoid excessive weight of the GP given the aphakic status of this eye. For the left eye, we were able to optimize distance vision and near vision with the use of a MF aspheric GP lens. When assessing the aspheric MF GP lens, it is important to assess the overall fit of the lens in primary gaze as well as downward gaze for adequate translation

CONCLUSION

Addressing the specialty lens needs of patients with ocular trauma involves a personalized and comprehensive approach. In this case, there were functional visual issues with glare and diplopia that took the combined effort of the prosthetic and GP for functional vision. Selection and fitting of specialized lenses for the specific condition can optimize the visual outcome.