Long-term outcome after topical Cyclosporine-A in post-LASIK epithelial ingrowth

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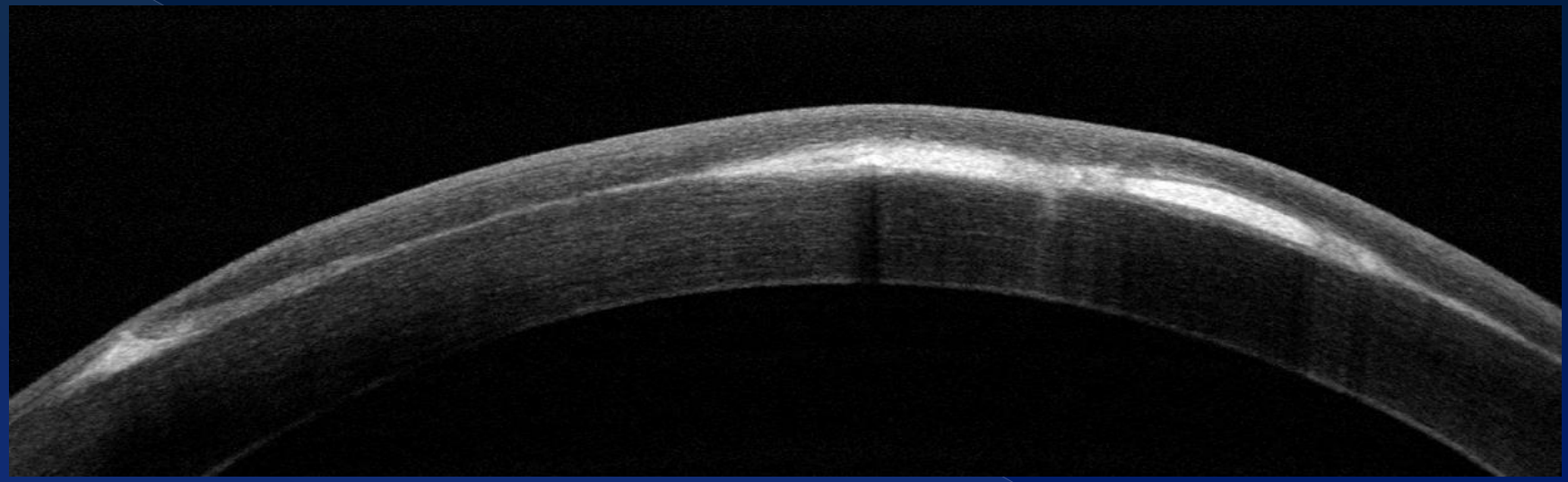

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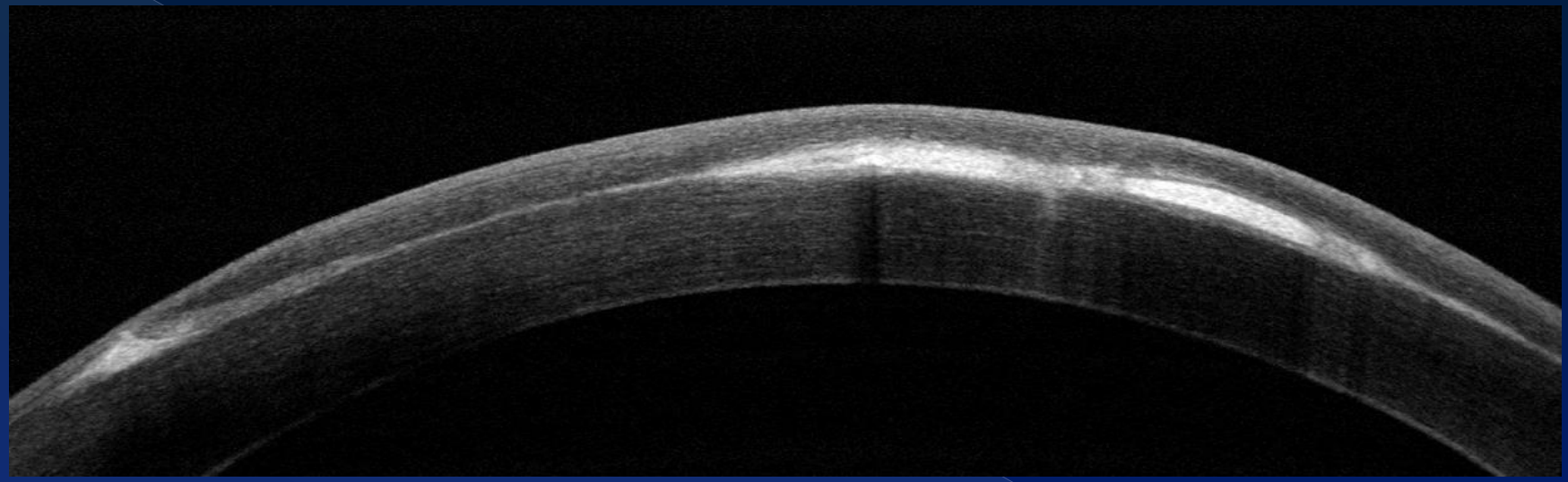
PURPOSE

To evaluate the efficiency of Cyclosporine-A as a conservative medical treatment for Grade 3 post LASIK epithelial ingrowth.



METHODS

A 44-year-old male patient presented with persistent recurrent Grade 3 epithelial ingrowth after LASIK retreatment. The patient had already received unsuccessful Nd-YAG LASER alongside with topical steroid treatment and he was reluctant to an additional surgical intervention.

Topical instillation of Cyclosporine-A 0.2% drops was used over a period of two years.

Two separate Anterior Segment OCT devices (one Swept Source and one Spectral Domain), Ray tracing Aberrometry, Corneal Topography and Slit Lamp imaging were used at follow up.

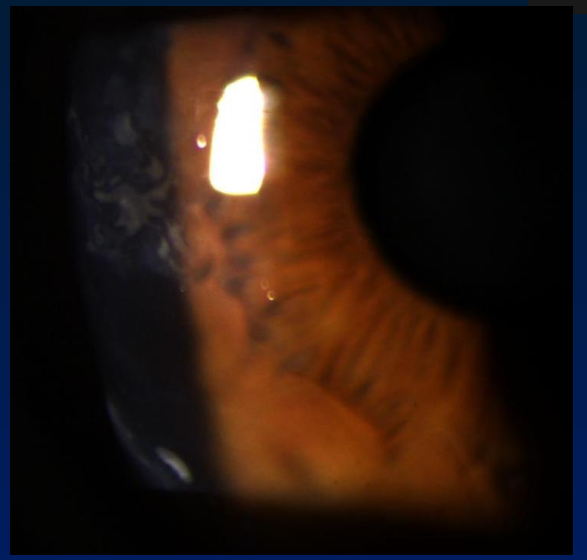
RESULTS

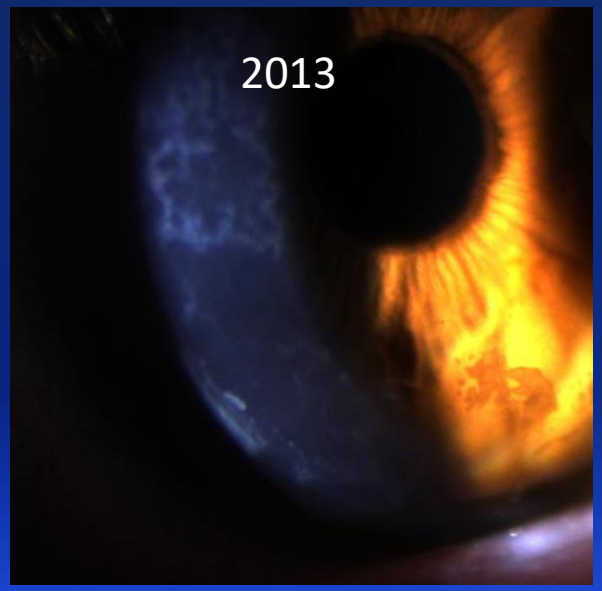
Progression of post-LASIK epithelial ingrowth was observed between 2013 and 2014 that was refractory to any treatment.

The patient was put on topical Cyclosporin-A 0.2% in 2014.

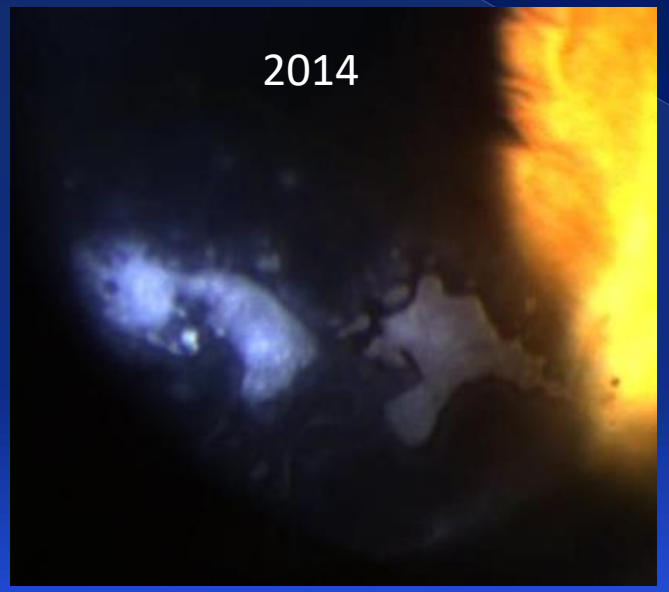
Further expansion of the epithelial ingrowth was halted already in the first 3 months.

Significant recession was evident after the first 6 months and continued for the following 2 years (2016).





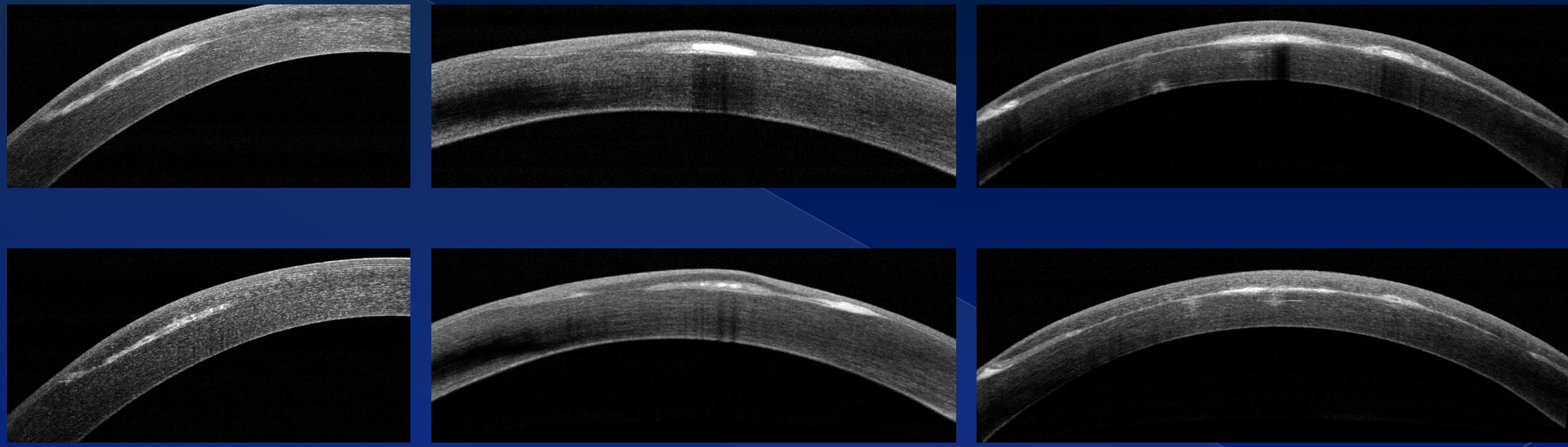
2013



2014

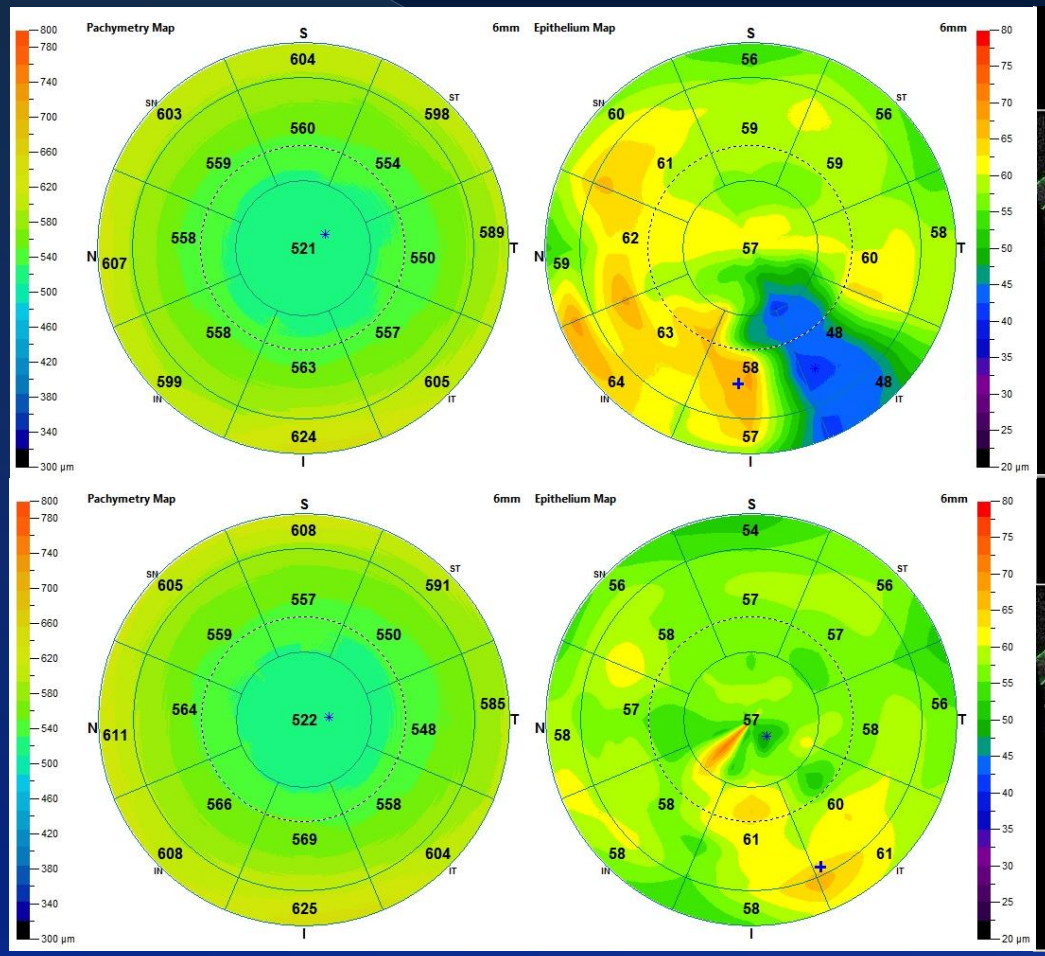
2016

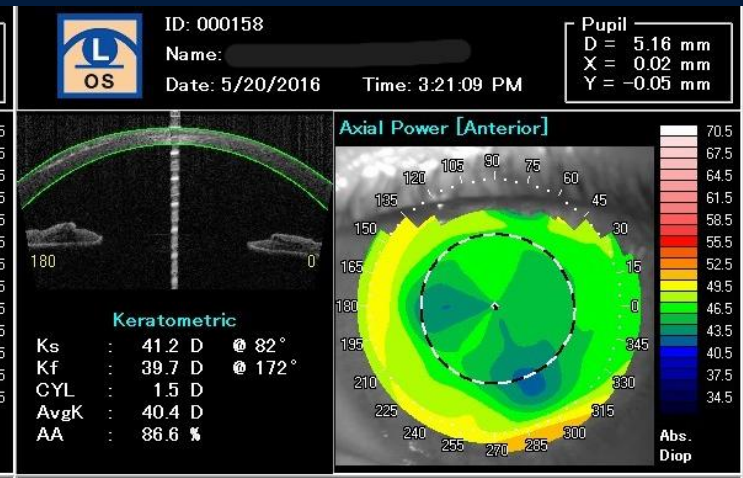
RESULTS

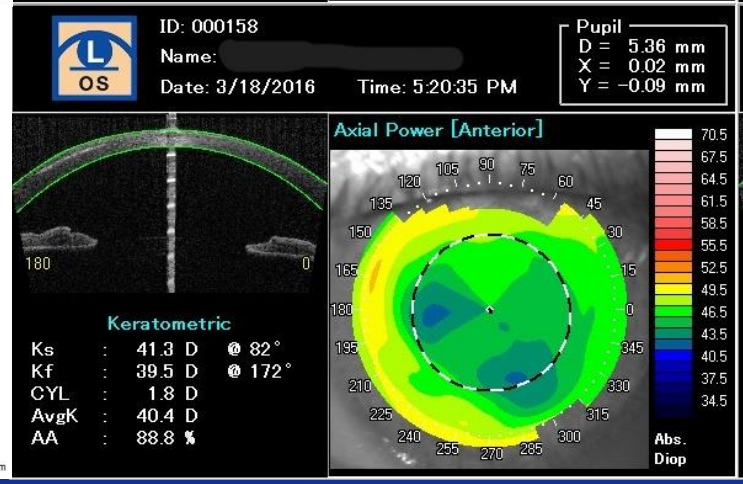


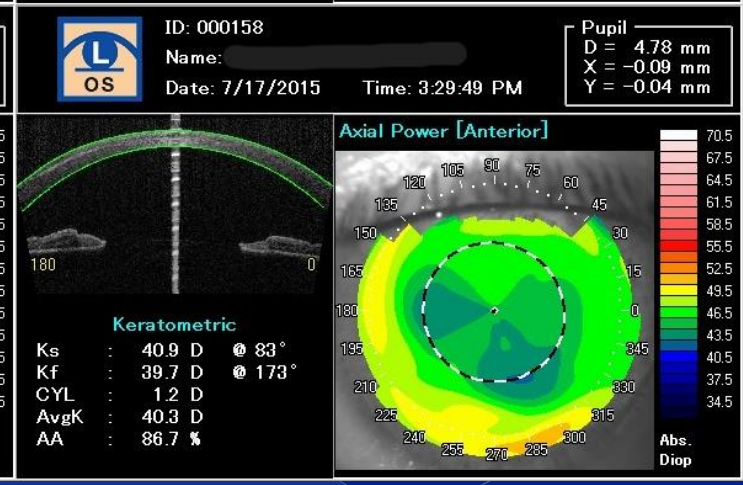
OCT scans confirm gradual thinning of the fibrotic tissue during treatment with topical Cyclosporine-A 0.2%.
Treatment was discontinued without recurrence with a follow up of an additional 7 years.

RESULTS



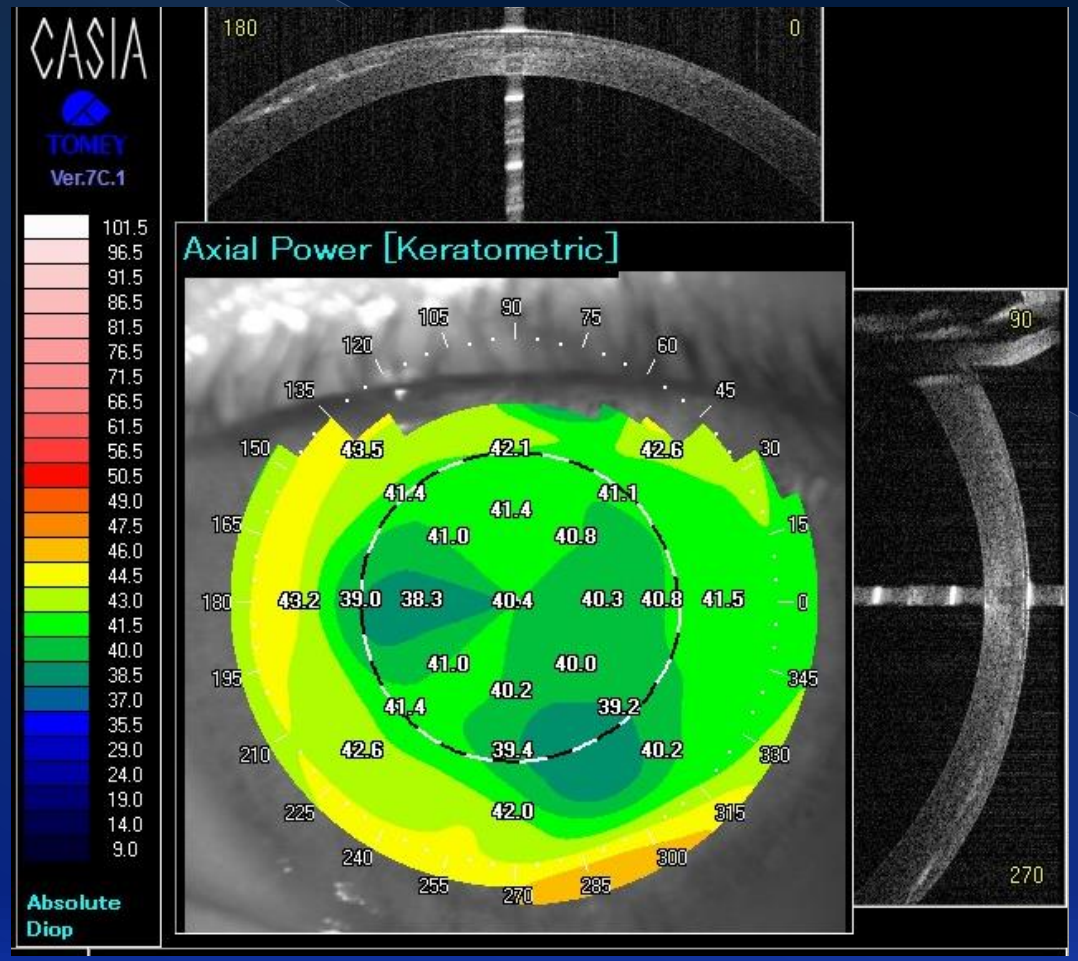


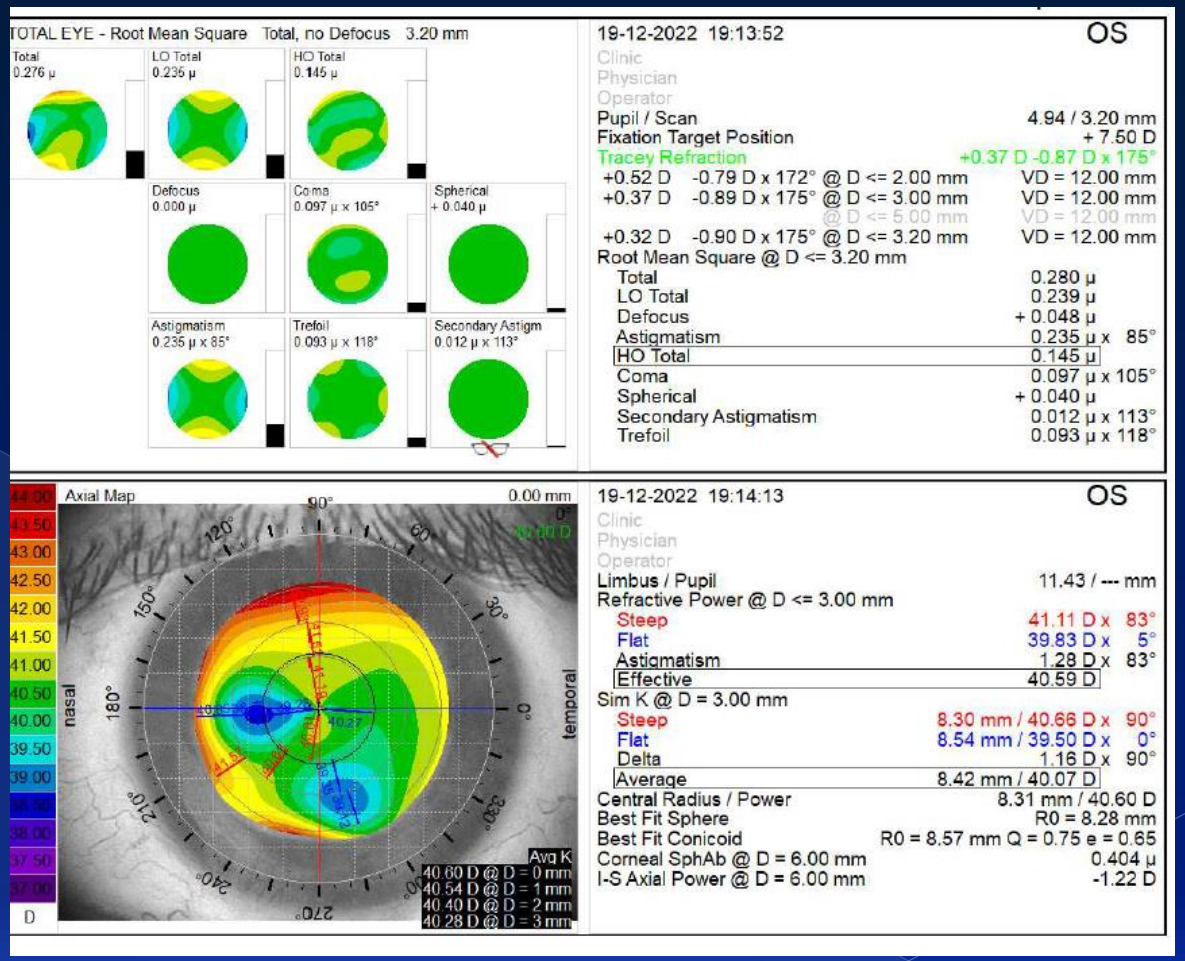




The epithelial map was normalized, topographical and tomographical irregularities were reduced and ray tracing aberrations were minimized after 2 years of treatment.

RESULTS





The areas of the ingrowth are shown in blue color. High Order Aberrations were minimized to 0.145µm.

CONCLUSION

Prolonged topical treatment with Cyclosporine-A 0.2% may prove efficient in persistent recurrent post-LASIK epithelial ingrowth.