

Post-Lasik Ectasia and Pigmentary Glaucoma

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Author has no financial interests to disclosure

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Purpose

- To report one case of post-LASIK ectasia associated with pigmentary glaucoma.

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Methods

- Case report.



Case Presentation

- A 31-year-old-man, presented due to progressive myopic regression and visual impairment after LASIK in both eyes.
- There was no previous ocular disease and negative family history for glaucoma.
- Uncorrected distance visual acuity (UDVA) was 20/60 OD and 20/80 OS.
- MRx: - 2.00 -1.00 x 160°, 20/20 OD
- 1.25 -3.75 x 125°, 20/50 OS
- Funduscopical exam: linear cup/disc ratio of 0.3 in OD and 0.7 in OS.



Biomicroscopy

- Pigment dispersion syndrome was detected by slit lamp biomicroscopy with Krukenberg's Spindle in both eyes.
- Fleischer ring and mild cornea edema in OS .



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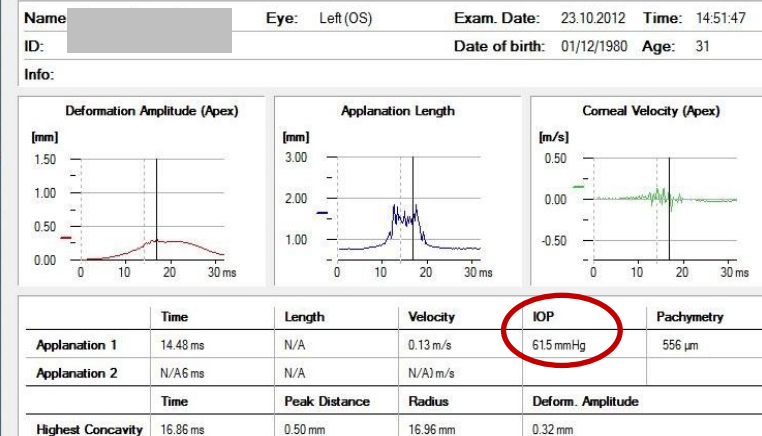
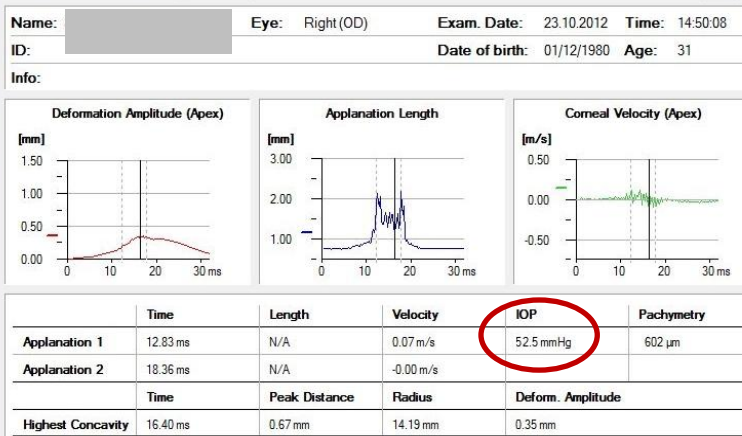


Intraocular Pressure

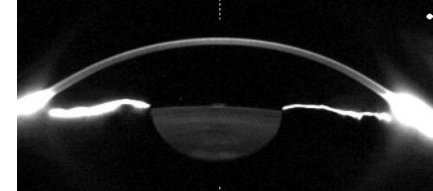
- Goldman applanation tonometry (GAT) was 18mmHg in both eyes.
- IOPcc by Ocular Response Analyser (ORA; Reichert, was 49.1 OD and 44.4 mmHg OS.
- IOP by Oculus Corvis ST was 52.5 and 61.5 mmHg in OD and OS respectively.

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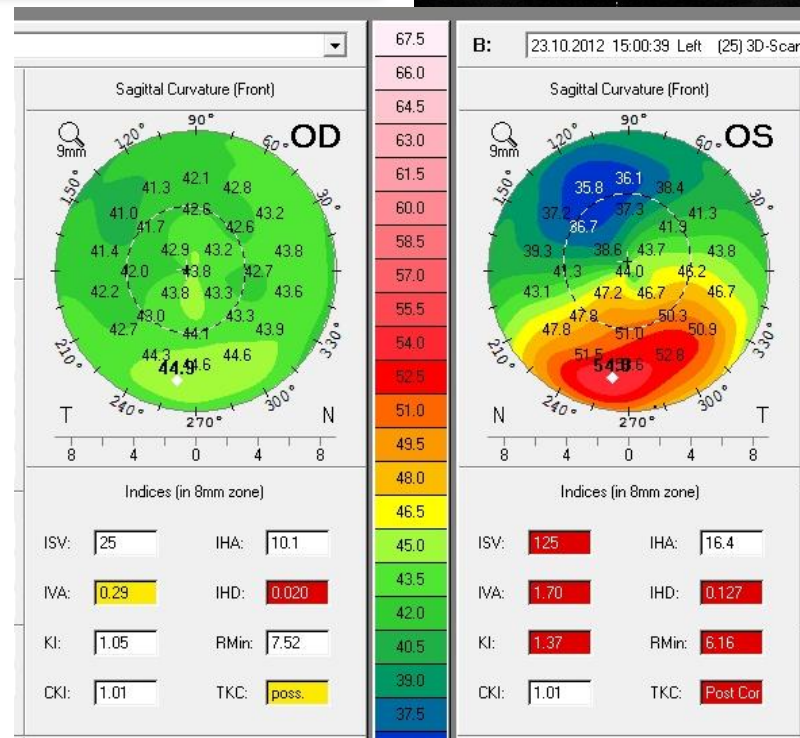


Ectasia Case

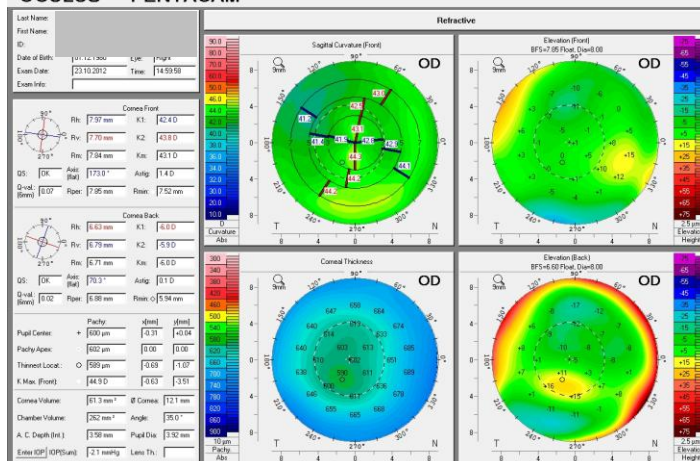


➤ Ectasia was confirmed by Pentacam HR corneal tomography (Oculus; Wetzlar, Germany) in both eyes, being more advanced in the left eye.

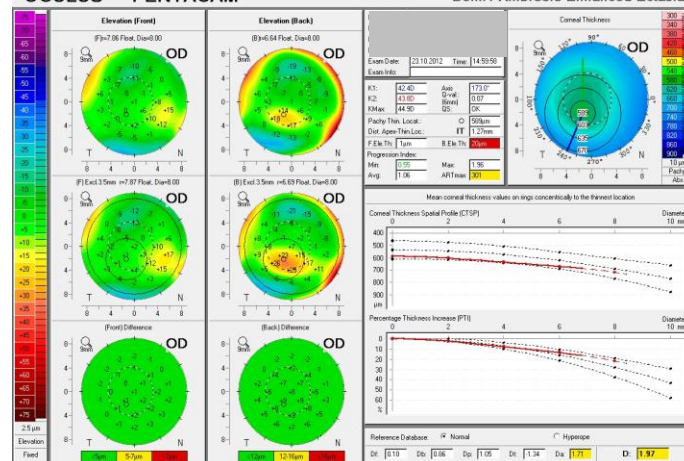
➤ Mild tomographic evidence of ectasia OD.



OCULUS - PENTACAM



OCULUS - PENTACAM



Belin / Ambrósio Enhanced Ectasia



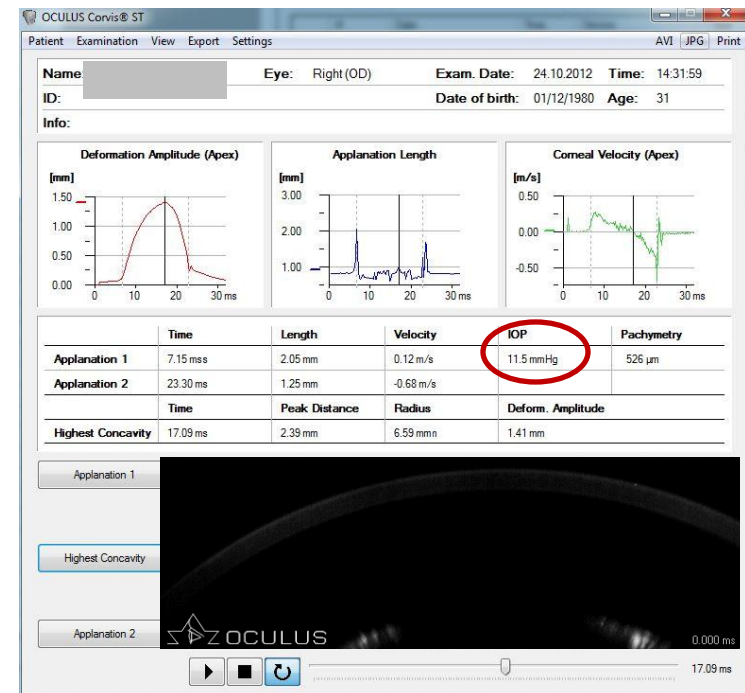
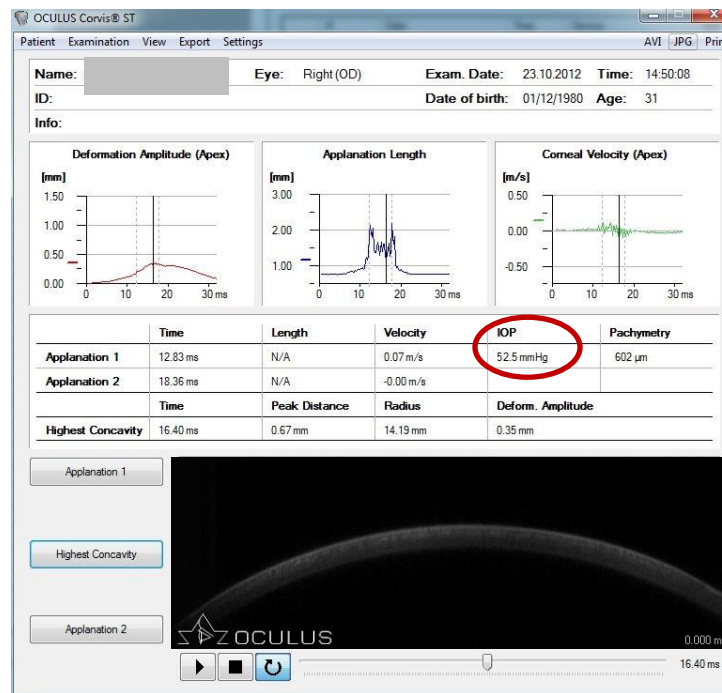
Results



- One day after topical fixed combination of timolol and topical carbonic anhydrase inhibitor (CAI)
- IOP was reduced to 11 mmHg in both eyes with much greater deformation amplitude observed with Corvis
- Impact of High IOP on Corvis ST Deformation

high IOP

after treatment

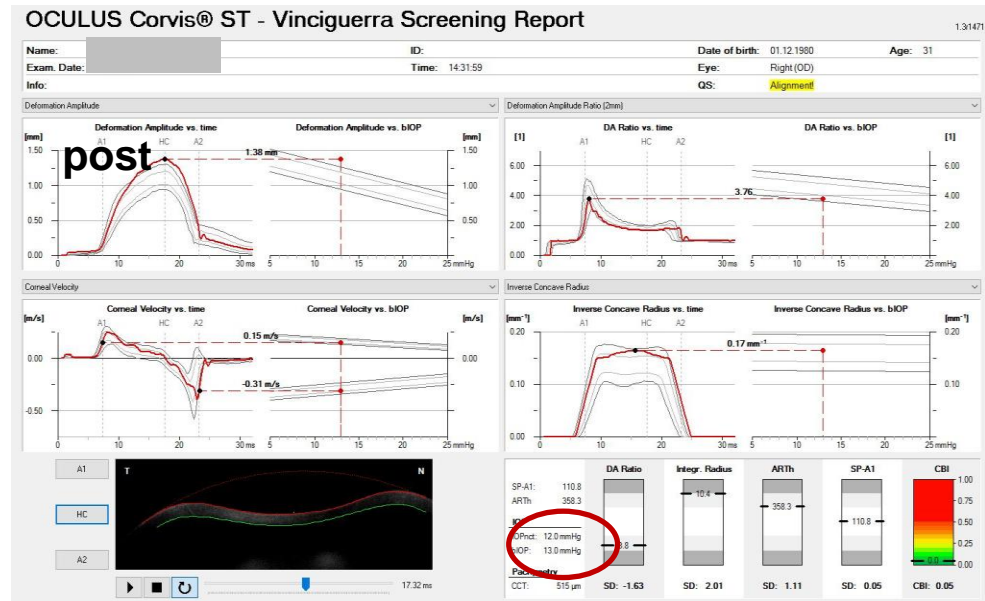
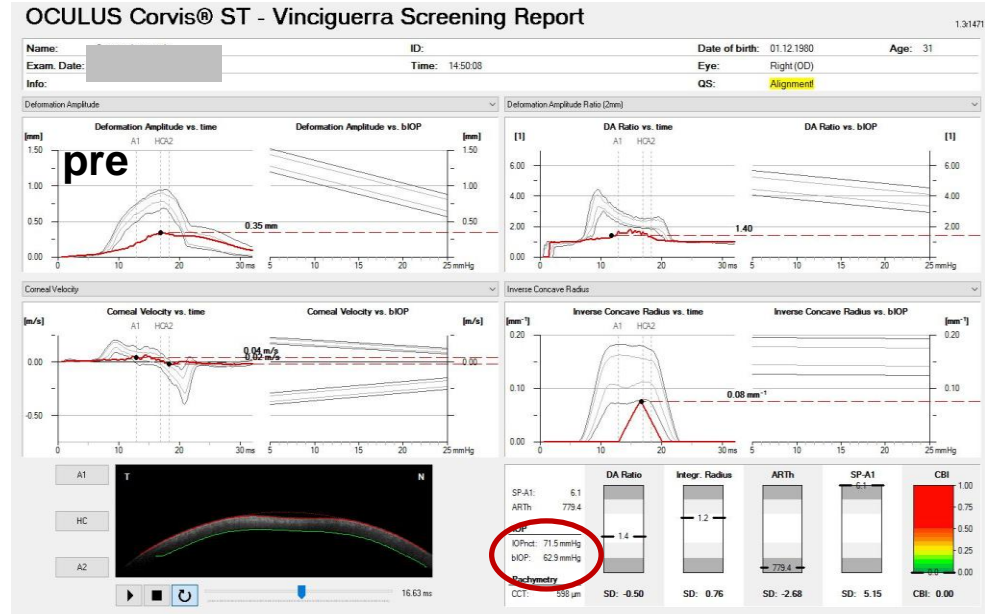


Impact of High IOP on Corvis ST Deformation

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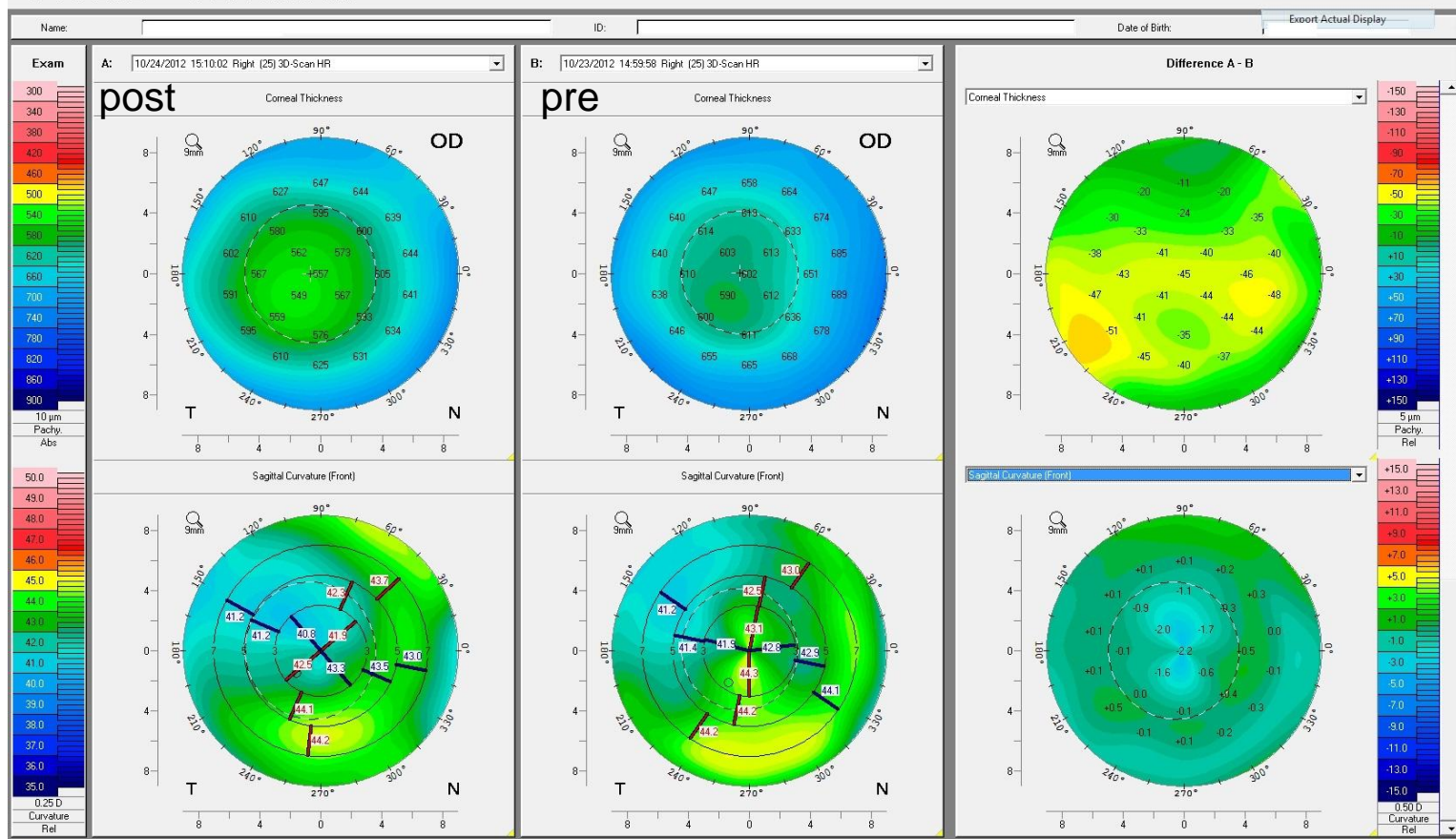


Rio de Janeiro
Corneal Tomography and
Biomechanics Study Group

Results

- Moderate flattening and regularization of the cornea and improvement in UCDA to 20/30 OD and 20/40 OS.

OCULUS - PENTACAM



- Sagittal curvature (below) and pachymetric (above) maps of OD. Post and pre treatment.

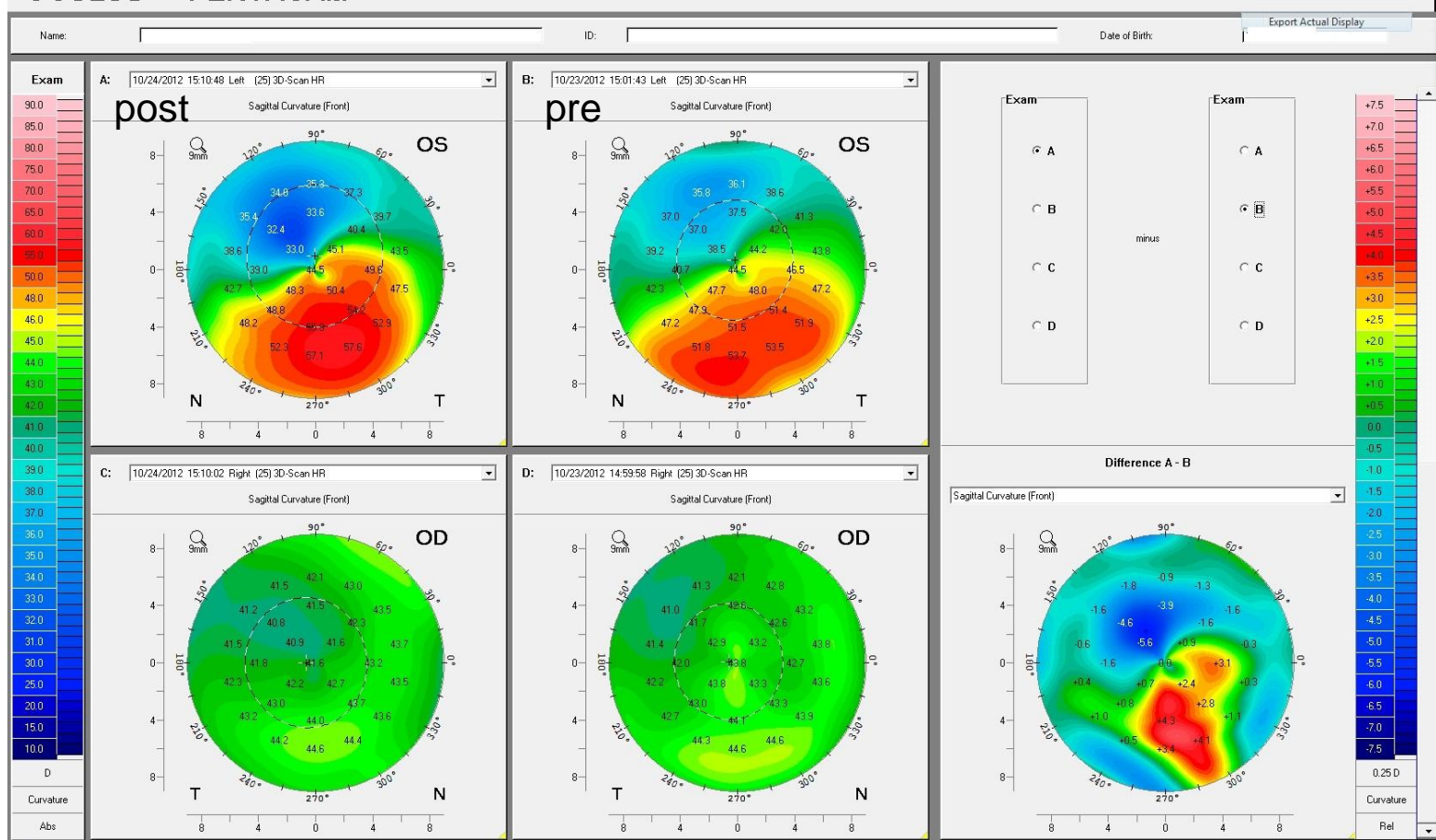
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Results

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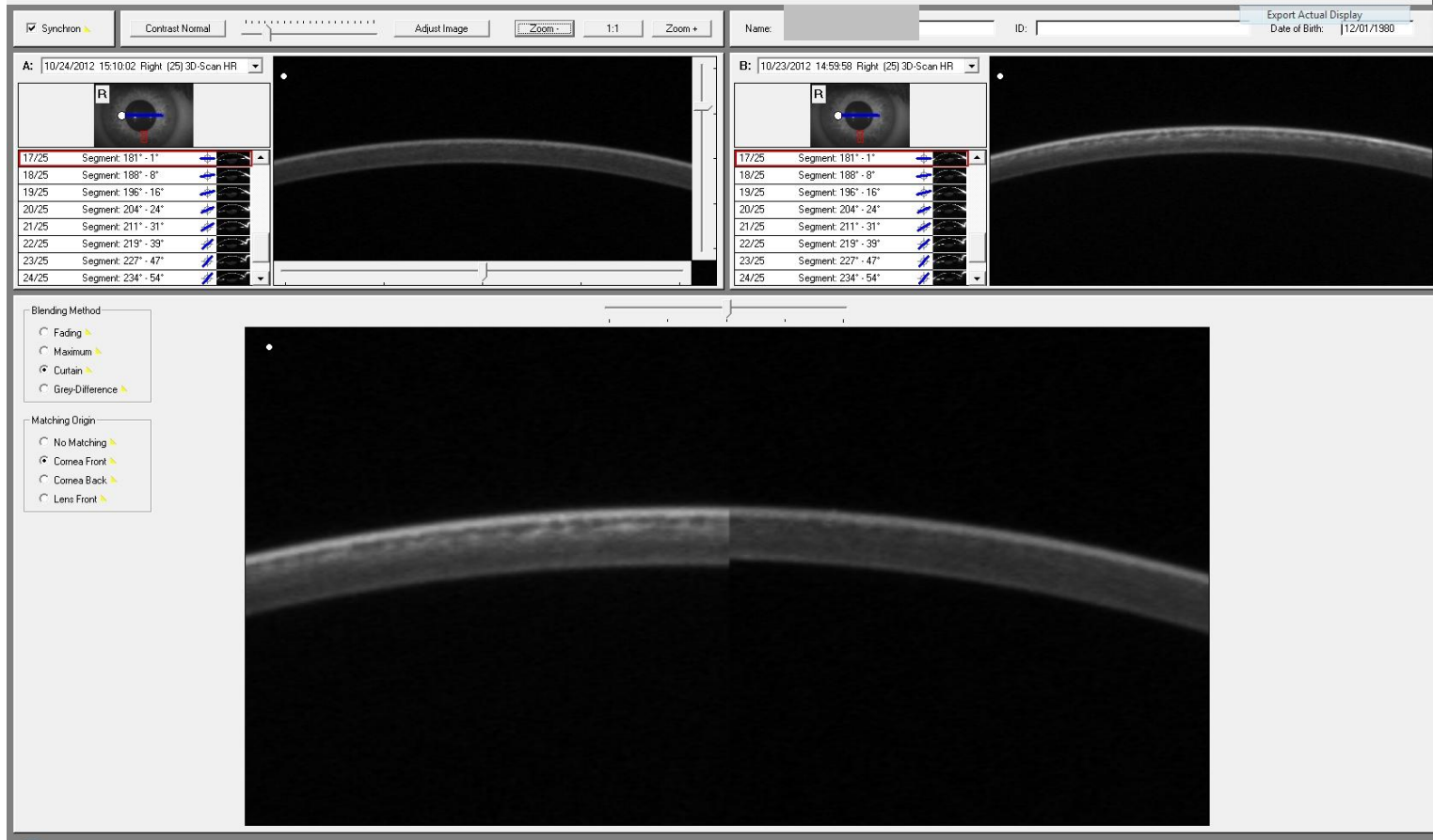
- Oculus Pentacam sagittal curvature maps. Post and Pre treatment.

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Results

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➡ Comparison of Scheimpflug images: pre (right image) and post (left image) treatment.



Conclusion

- Post-LASIK ectasia may present with secondary glaucoma and reduction on IOP may dramatically change corneal shape.
- Refractive surgeons must be aware of the importance of proper IOP assessment after laser vision correction.
- An association between pigment dispersion syndrome and ectatic corneal disease deserve further studies.

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