



Refractive Surgery Nightmare

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No Financial interest

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- Male.
- 51 Year-old.
- Smoker.
- Right side neck Myxoid Pleomorphic Sarcoma. Surgically excised proceeded by chemo and radiotherapy 4 years ago.
- Hypertensive.

□ Ocular History:-

- Preoperative clinical data were not fully presented by the patient or well known by him but he reported being Myope.

- Underwent bilateral LASIK procedure elsewhere 3 months prior to referral to our center.
Patient reported uneventful procedure.

- Gradual diminution of vision started 7-10 days postoperative.

- Both Flaps were lifted and interface was washed (OU) 2 months after surgery and one month prior to referral .

▪ Medication:-

- Azithromycin ED - Hyperosmolar Saline ED - IOP lowering ED
- Platelet Rich Plasma ED - Oral Antiviral (acyclovir) - Vitamin C tab.

- Lubricant ED

- Immunological Investigations (ANA and anti-dsDNA) were Negative.

The Symptoms and the signs

❑ Complaint:

Redness , Pain and progressive deterioration of vision since the surgery, severe photophobia, severe haziness.

❑ Clinical examination: (similar signs bilaterally)

- Severe corneal and flap Edema.
- Descemet folds.
- Ciliary Injection.
- Normal IOP.



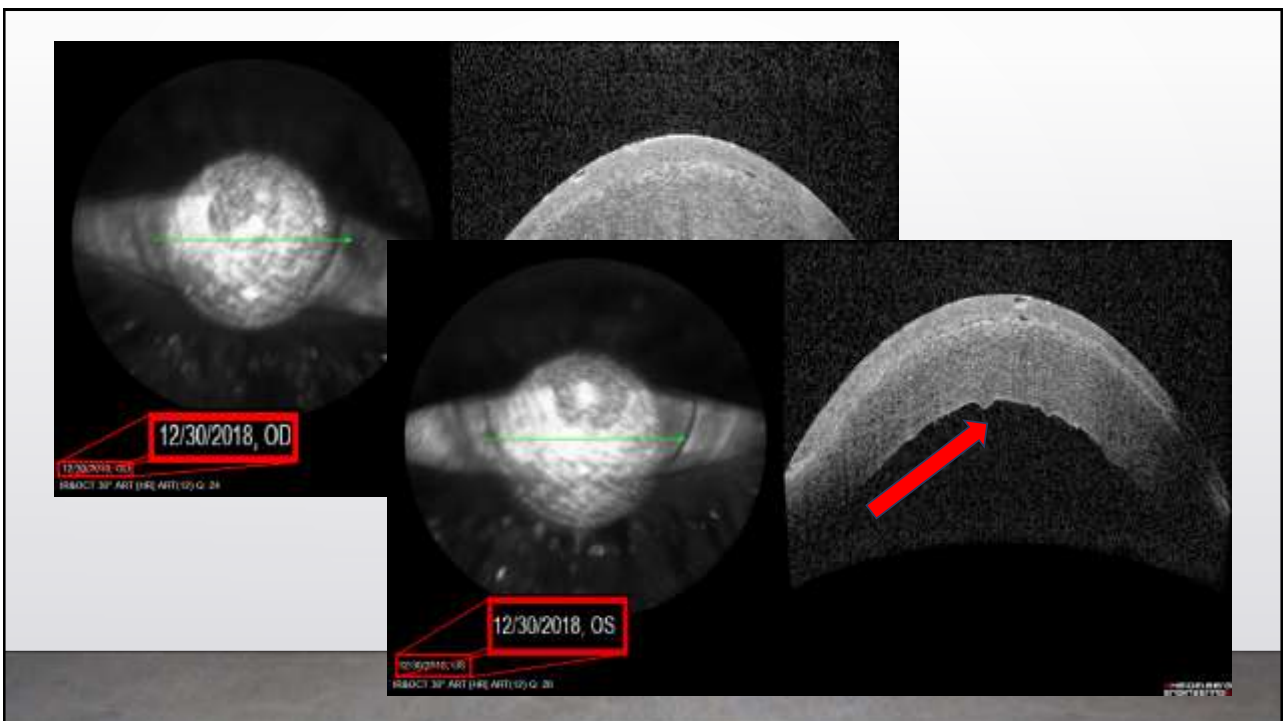
WHAT COULD IT BE?!!

- Interface Fluid Syndrome. (IFS)⁽¹⁾
- Diffuse lamellar keratitis.⁽²⁾
- Infection. (Bilateral !)

1. Randleman J, Shah R. LASIK Interface Complications: Etiology, Management, and Outcomes. Journal of Refractive Surgery. 2012;28(8):575-588.
2. Linebarger E, Hardten D, Lindstrom R. Diffuse lamellar keratitis: diagnosis and management. Journal of Cataract & Refractive Surgery. 2000;26(7):1072-1077.

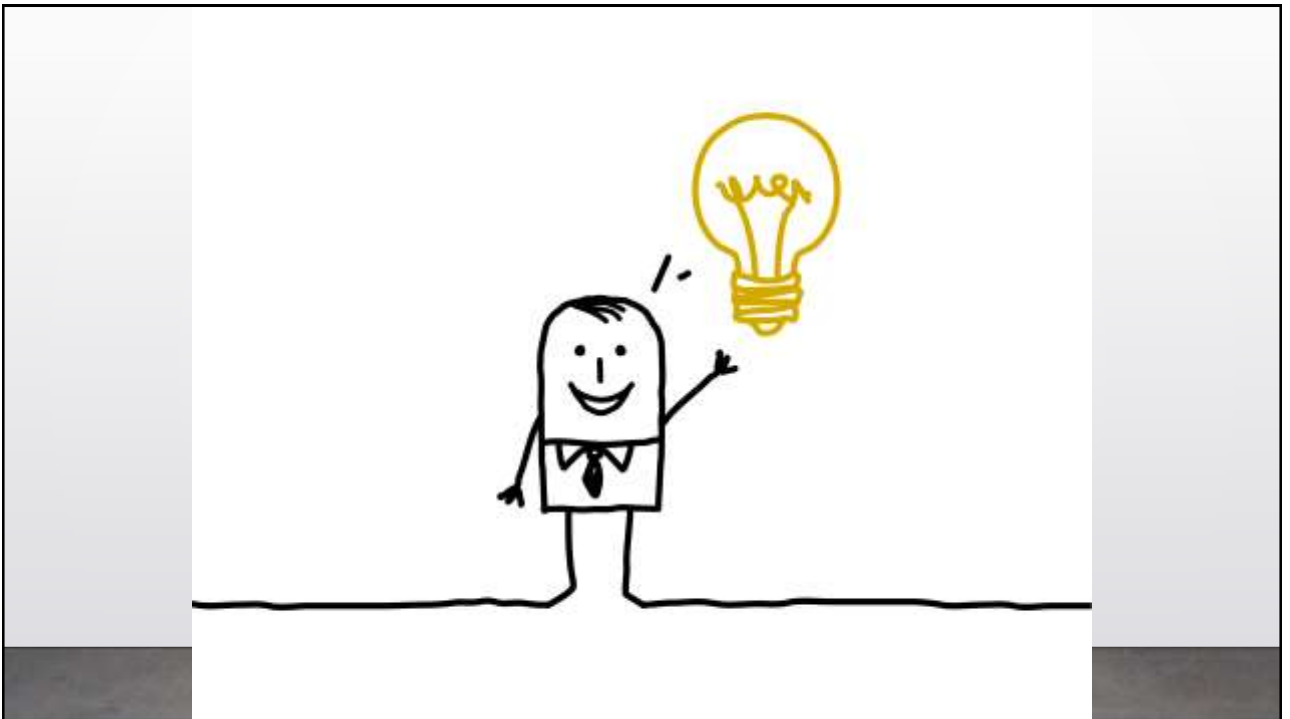


- ❑ IFS is characterized by accumulation of fluid in flap- stroma interface with elevated IOP .
- ❑ The patient had normal IOP and wasn't on steroids ED. In fact, he was receiving IOP lowering ED.
- ❑ A deeper look at the anatomy of the cornea to understand the configuration was needed, so anterior segment OCT was done .

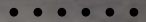


DD : of the OCT:

- ❑ Right Endothelial Detachment.
- ❑ Minimal flap-stroma interface fluids.
- ❑ Bilateral endotheliitis.

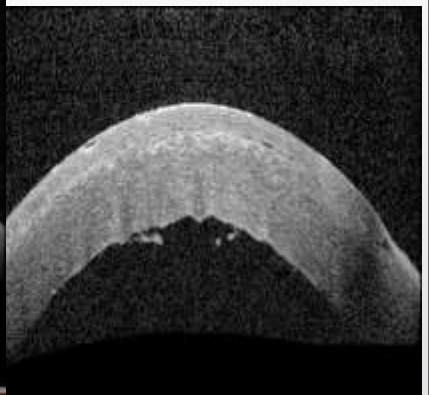
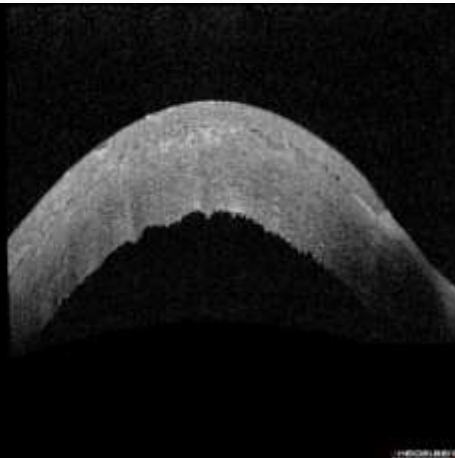
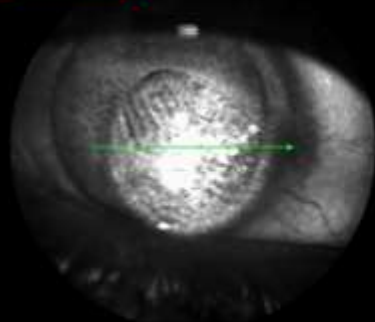


- ❑ Stop IOP lowering ED.
- ❑ Frequent Steroid ED.
- ❑ Topical Antiviral ED.

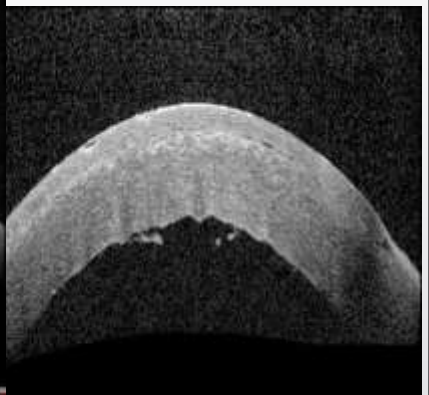
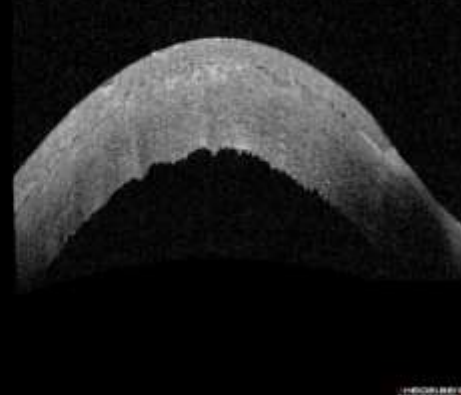


Four Days Later

1/2/2019, OD



12/30/2018, OD



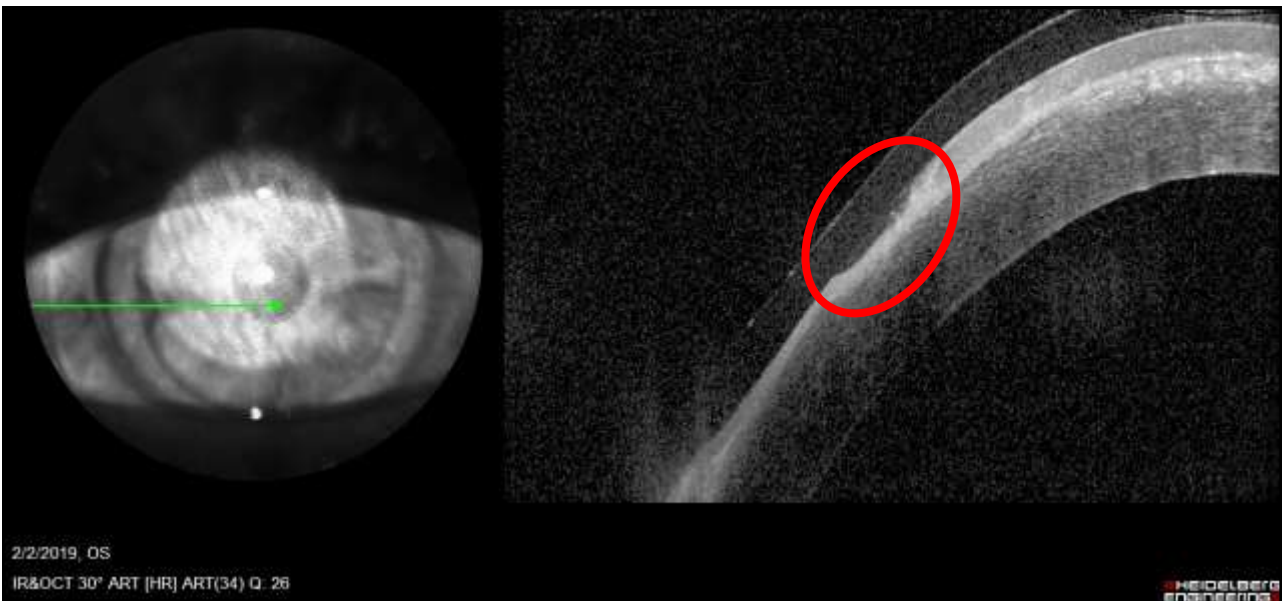
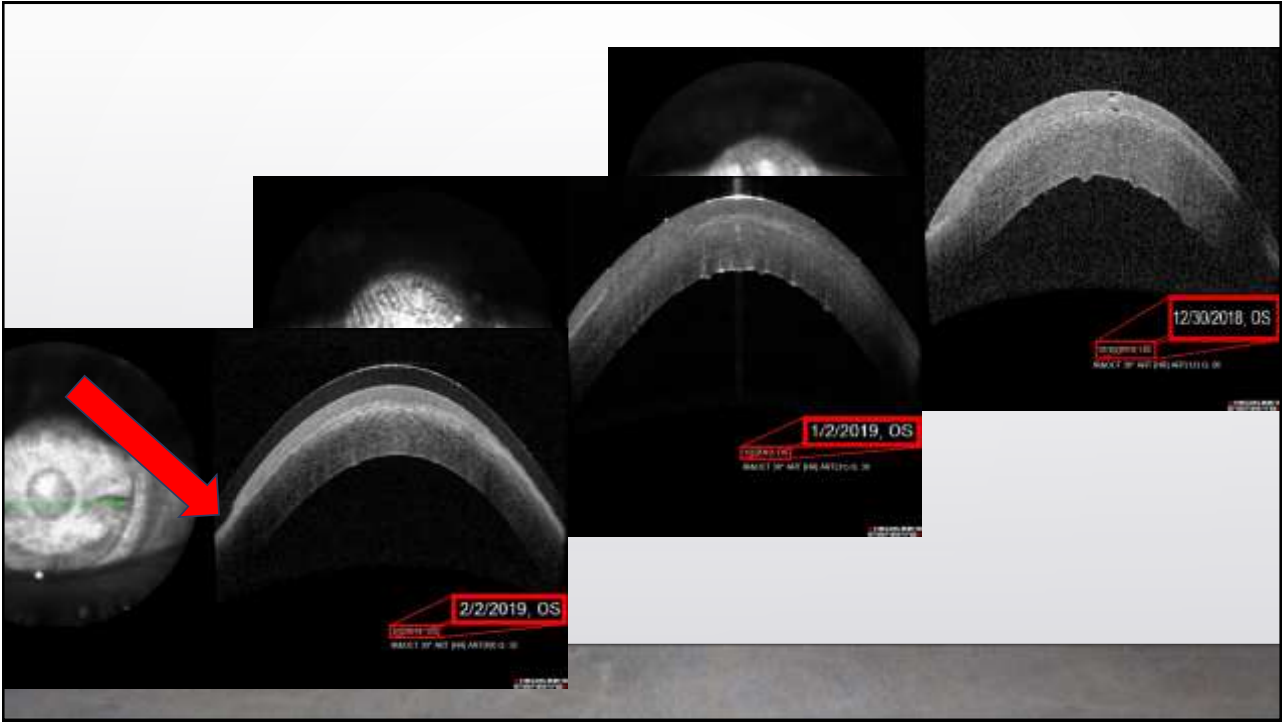


Three more days

- ❑ Bilateral central corneal epithelial erosions.
- ❑ A corneal matrix repairing agent was added (CacicolTM).
- ❑ Bandage contact lenses were applied for both eyes.

One month later

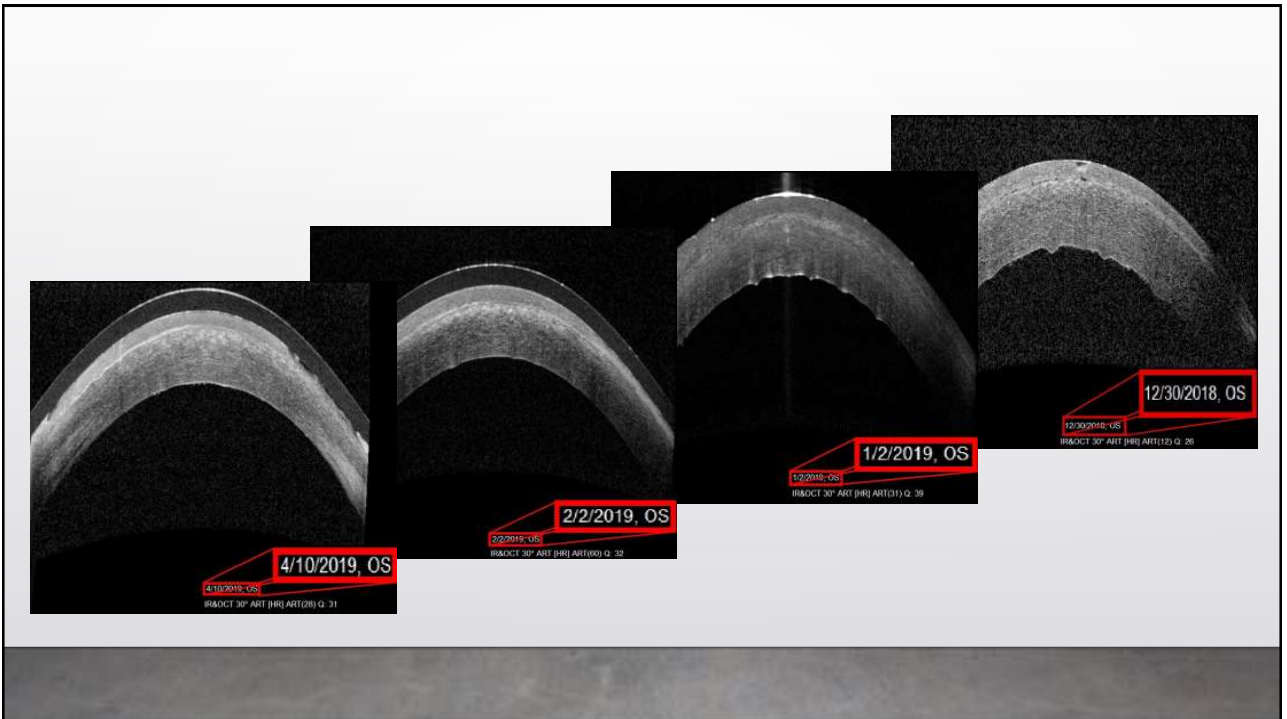


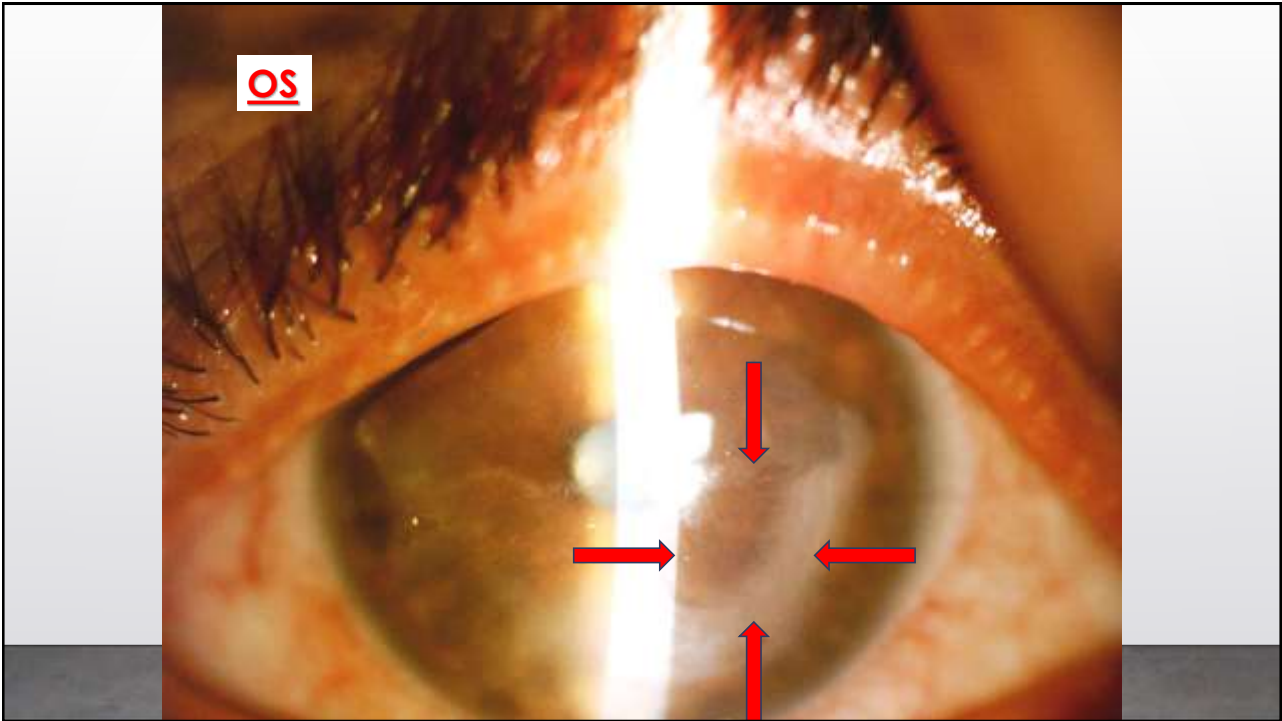
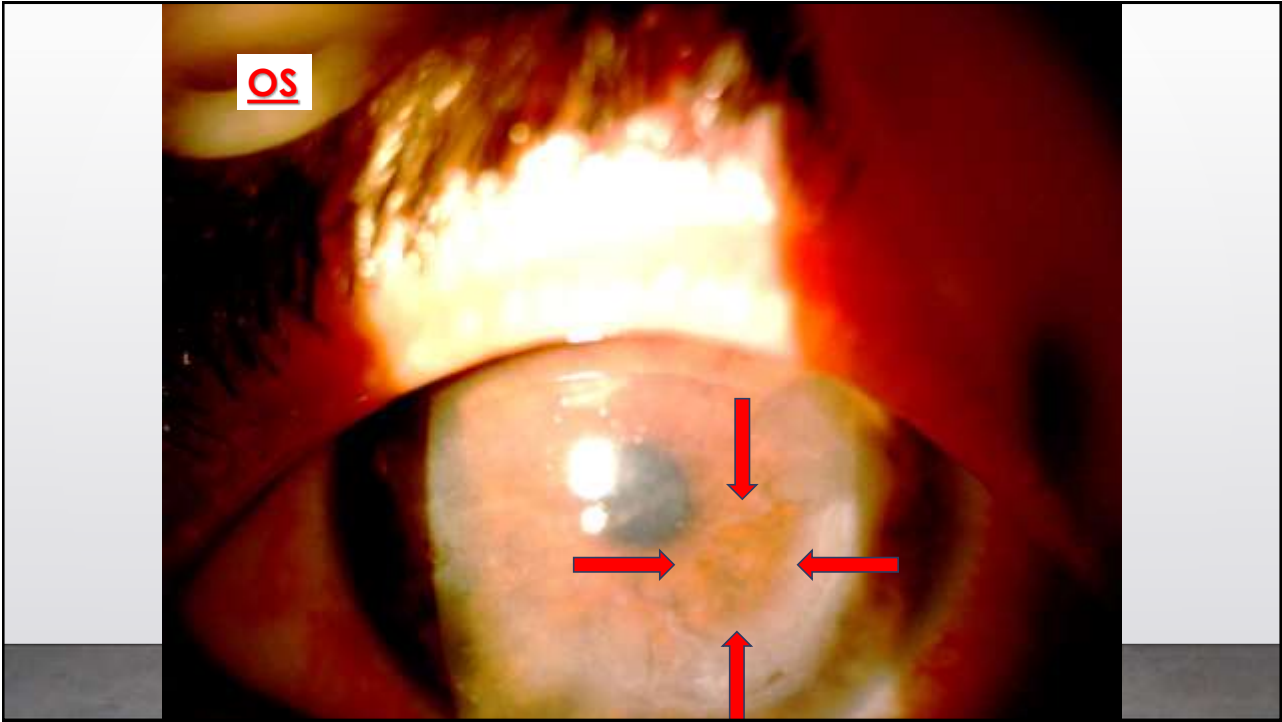


Left flap started an area of melting ! Contact lenses were kept in place.

100 days visit

- Condition remained almost stationary except for slow progression of left flap melting.

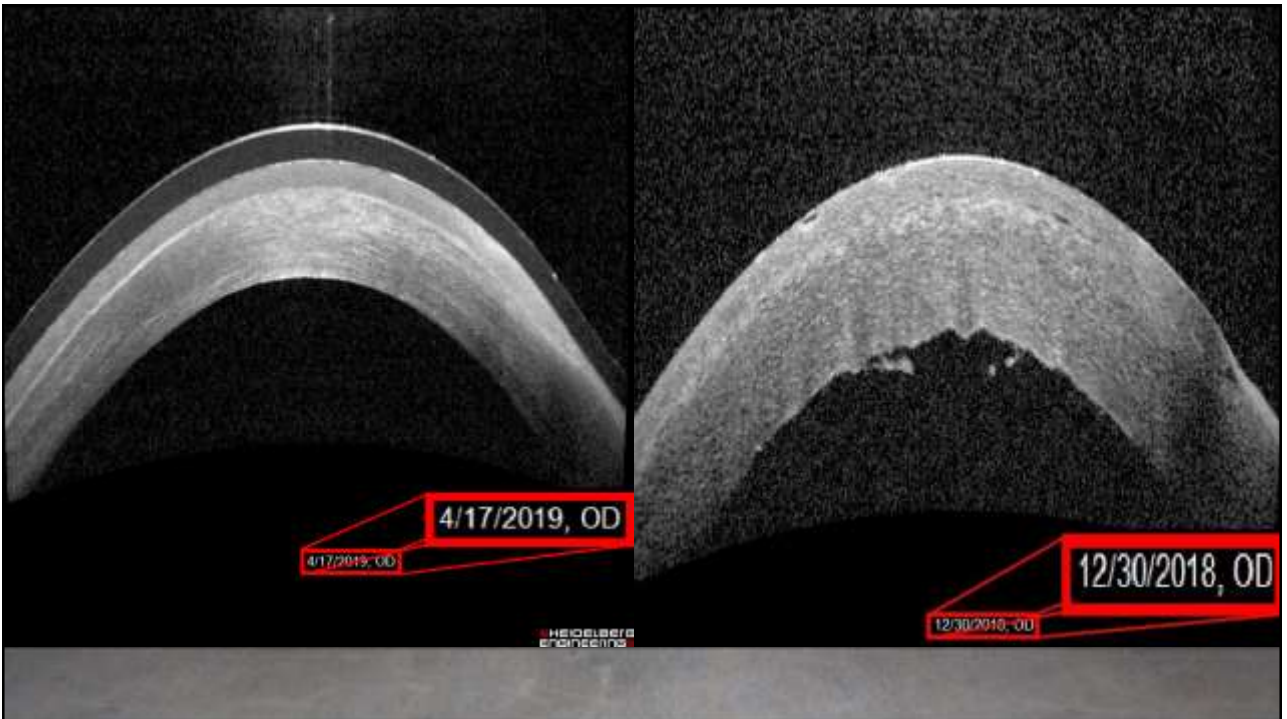


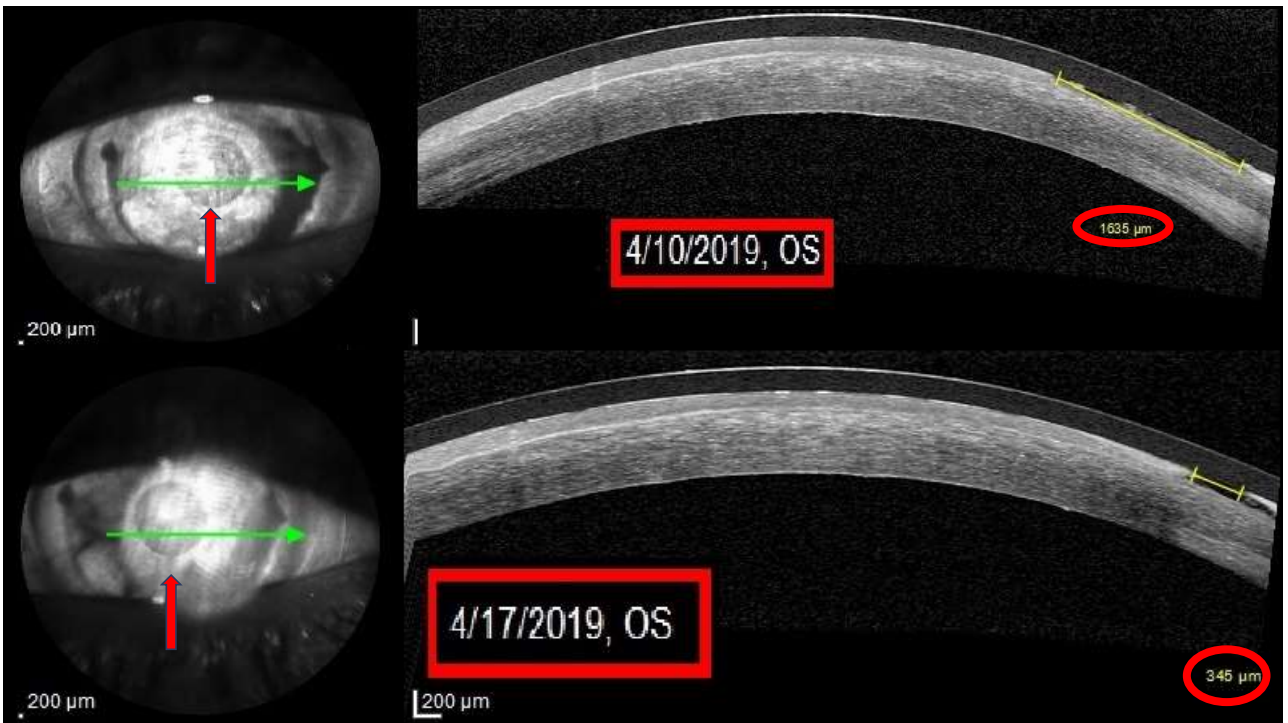


17/4/2019

OD

OS





- **Visual acuity**

UCVA : 0.6 OD and 0.8 OS.*

BCVA : 0.6 OD and 0.9 OS.*

- **Refraction:**

OD: S +1.75 C -0.5 X 95

OS: S +1.5 C -2.0 X 60

* Visual acuity measured in decimal.

☐ Take Home Message:

- 1. Endothelial cell changes can occur after uneventful LASIK procedure.⁽¹⁾**
- 2. Interface fluid syndrome is not always steroid induced or related to elevated IOP.⁽²⁾**
- 3. Lasik is not always safe.**

1. Chaudhry P, Prakash G, Agarwal A, Mazhari A, Kumar D, Agarwal A et al. Endothelial Cell Loss Associated With Diffuse Lamellar Keratitis Because of Laser-Assisted In Situ Keratomileusis. *Eye & Contact Lens: Science & Clinical Practice*. 2012;38(4):263-265.

2. Galvis V, Berrospi R, Tello A, Santaella G. Interface Fluid Syndrome (IFS) following Toxic Anterior Segment Syndrome (TASS): not related to high intraocular pressure but to endothelial failure. *Saudi Journal of Ophthalmology*. 2019;33(1):88-93.

4. Routine Specular Microscopy?

5. Anterior segment OCT is Mandatory for Refractive Surgeons.

6. Corneal collagen cross linking?

7 Flap Amputation?

Patient in the last week showed improvement as he is receiving Flaygl and Antibiotics

Bibliotheca Alexandrina

Thank You

