

First Removal of Retained Descemet Membrane Using Femtosecond Laser

Sultan Alrashidi, MD

Yassine Daoud, MD

William May, MD

*The authors have no financial interests to
disclose*

Purpose :

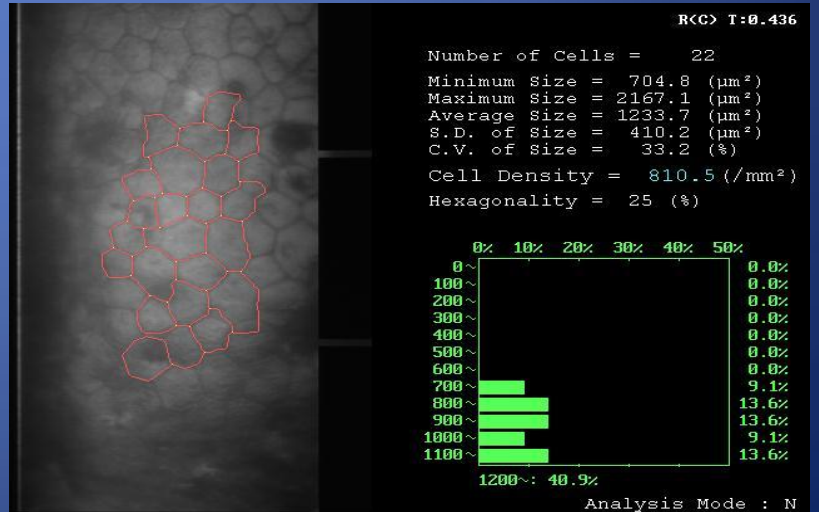
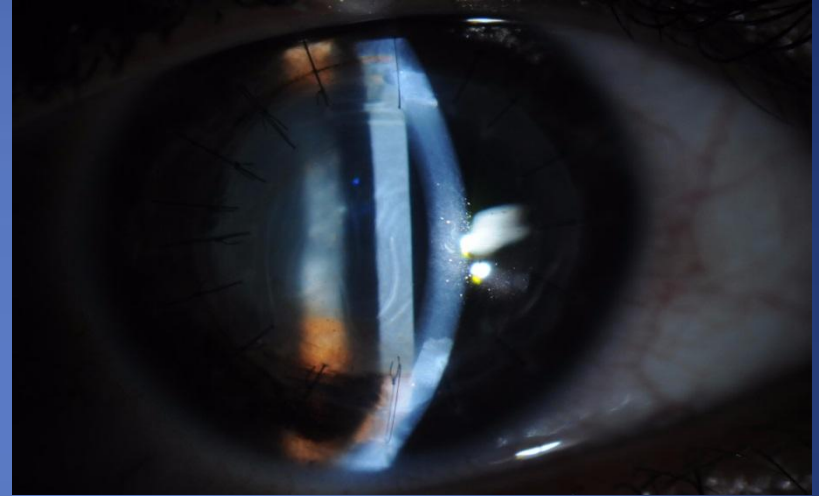
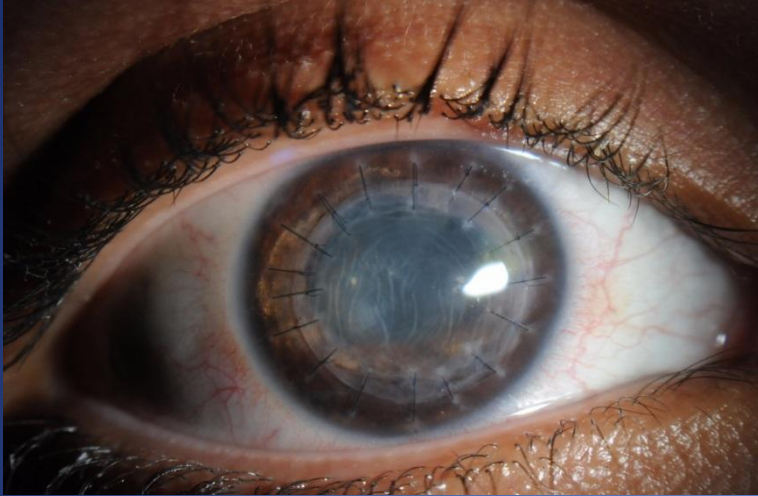
- To report the use of femtosecond laser (FSL) for removal of retrocorneal membrane .

Methods :

- A case report of a 22 year old male who underwent penetrating keratoplasty for keratoconus in his left eye . Ten months later, the patient presented to our clinic with :
 - Blurry vision in the left eye.
 - Uncorrected visual acuity was 20/300.
 - Intraocular pressure was 17 mmHg.

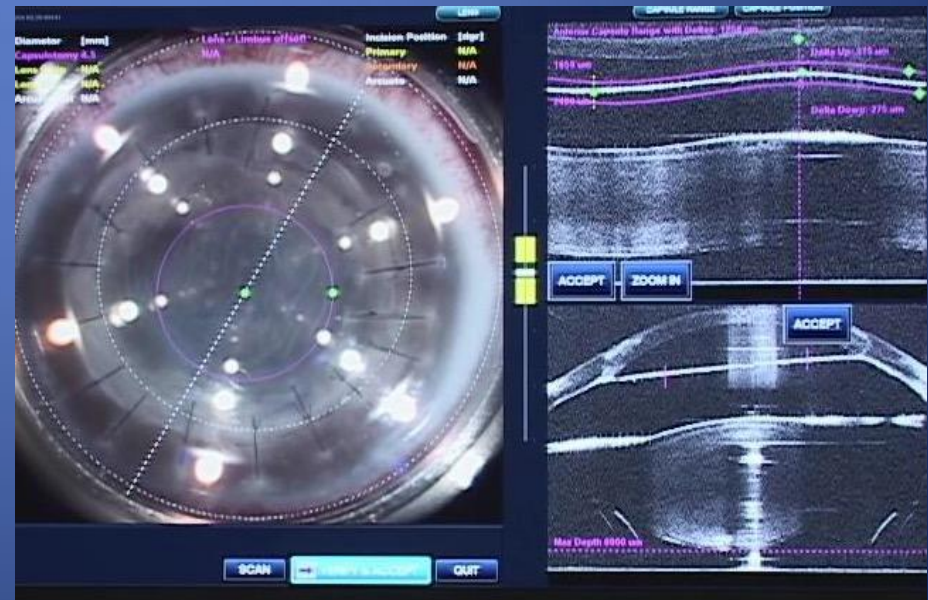
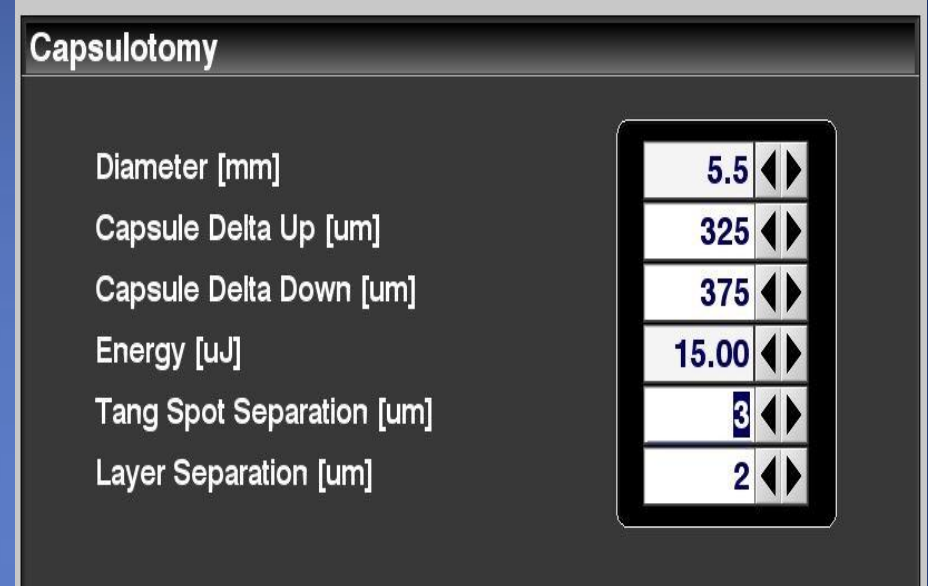
Methods :

- Ocular examination revealed:



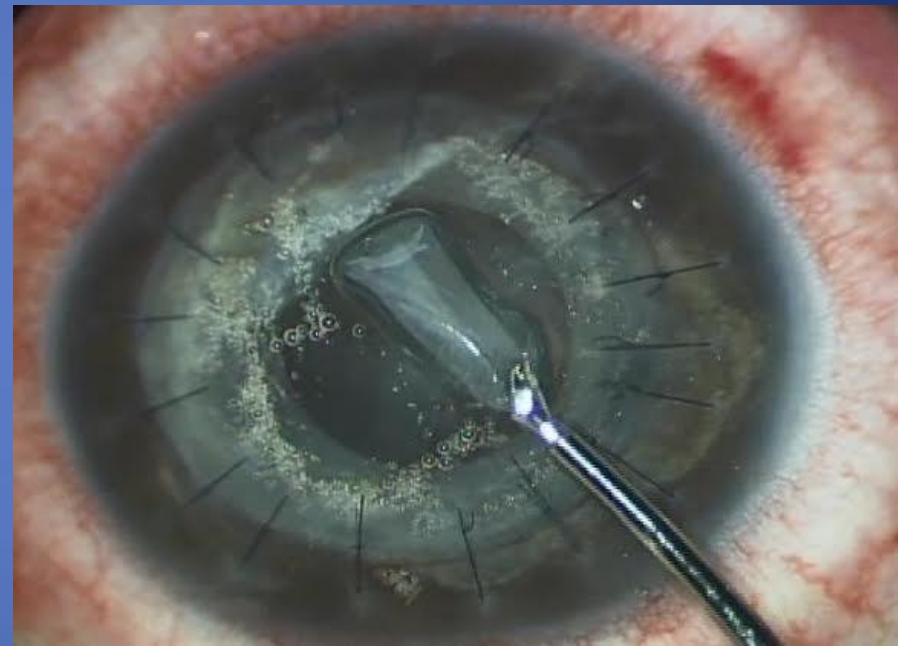
Methods :

- Removal of the retrocorneal membrane with femtosecond laser (FSL) was planned.
- The laser beam was focused on the retrocorneal membrane instead of the anterior capsule.



Methods :

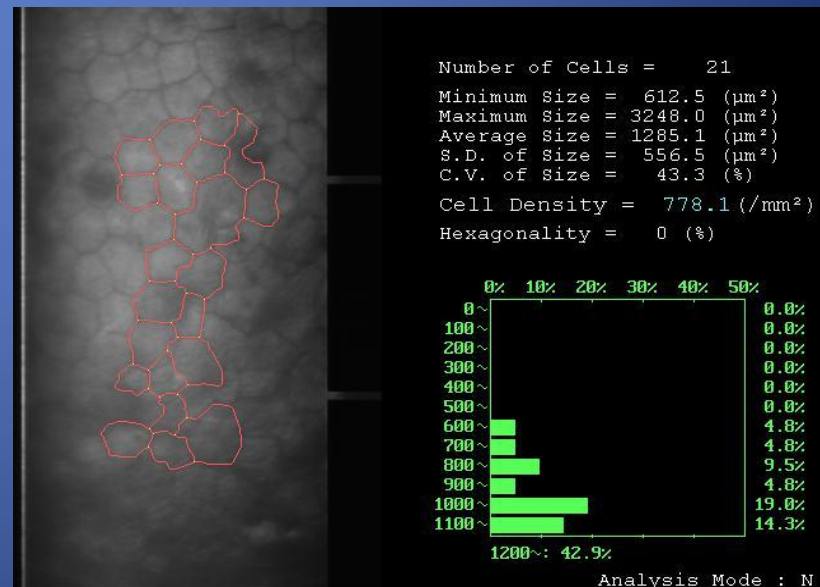
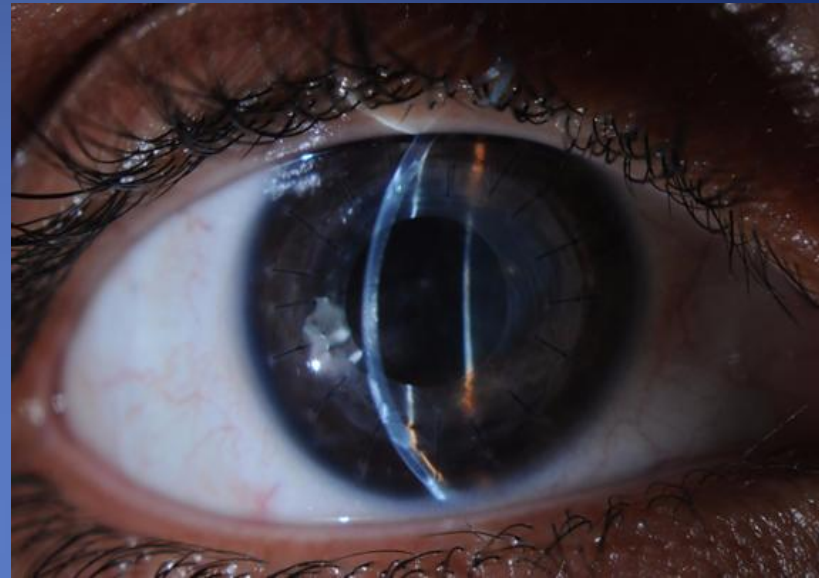
- After FSL treatment, the retrocorneal membrane was removed smoothly with capsulorhexis forceps through a 2 mm limbal corneal incision under operating microscope.



Results :

□ Postoperative :

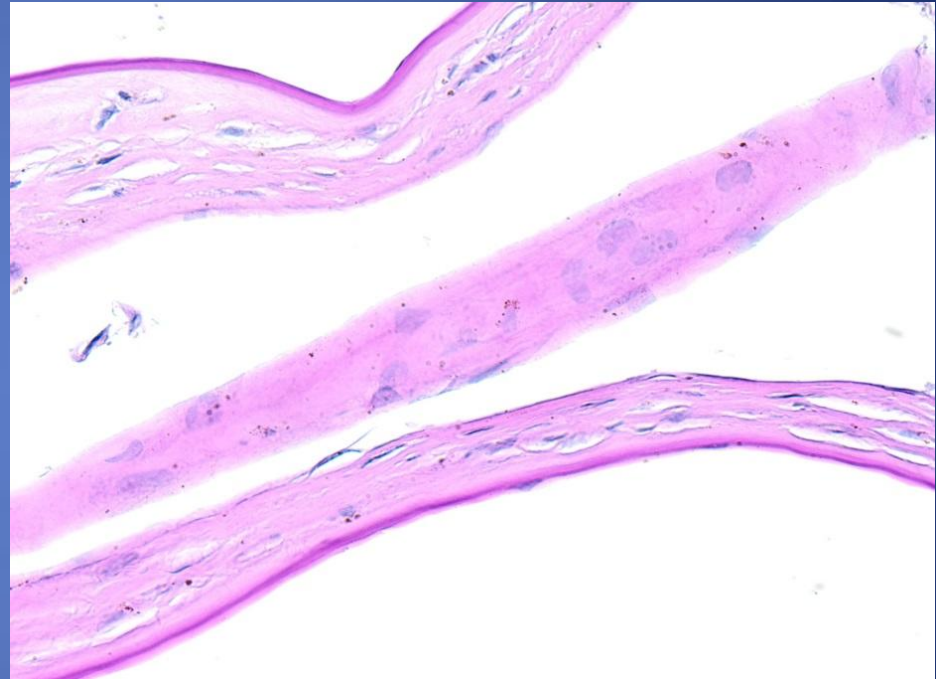
- UCVA 20/50 , IOP 16 .
- Clear corneal graft, a well centered 5.5mm opening in the retrocorneal membrane.
- Specular microscopy showed a minimal decrease in endothelial cell count to 778 .



Analysis Mode : N

Results :

- Tissue histopathology established the diagnosis of retained Descemet Membrane (DM) .



Conclusion :

- This report discuss the first use of FSL in a case of retrocorneal membrane after penetrating keratoplasty.
 - Advantages of FSL :
 - reduced intraocular operative time .
 - less stress on corneal endothelial cells .
 - less intraocular manipulation in a phakic patient .
 - Disadvantages of FSL :
 - Additional equipment and cost associated with the FSL .

Conclusion :

- The FSL can be used to safely remove retained DM. It results in a perfectly centered and round membranotomy, with minimal effect on the corneal endothelial cells .