

Refractive

Spontaneous delayed rotation of toric implantable collamer lens (TICL) four years after initial implantation: A case report

Presenting author: Giacomo Branger, Switzerland

Session name: Case reports II - Refractive

Date and time: 10 October 2021, 08:00 - 09:30

Presentation time: 08:00 - 08:06

Location: Hall 9

Purpose:

Postoperative rotation of TICL is a well-known but rare complication. Rotations typically occur within the first week. Causes include incorrect sizing, residual Healon in the anterior chamber and trauma. In the event of a significant rotation (more than 10°) an operative readjustment is usually needed.

Setting/ Venue:

Tertiary referral center, Lucerne, Switzerland

Report of Case:

A 30-year old patient underwent TICL implantation for high myopia and mild astigmatism in both eyes. The procedure was uneventful with an uncorrected visual acuity (UCVA) of 1.6 (Snellen) after 5 days. Follow-ups after 1 and 2 years were regular with a stable UCVA of 1.25 - 1.6. 4 years after the initial procedure, the patient noticed a spontaneous decrease in visual acuity in the left eye during a world-travel. He denied any trauma or high-velocity extreme sport. On examination, UCVA was decreased to 0.32 due to an TICL rotation of almost 90° from targeted 10° to 98°. Ultrasound Biomicroscopy showed no irregularities. Surgical TICL rotation was performed with a postoperative UCVA 1.25 (Snellen). The postoperative follow-up after 1 year showed a satisfactory result with a stable axis and a UCVA of 1.25 (Snellen).

Conclusion/Take Home Message:

This is the first report to reveal a delayed, massive postoperative TICL rotation four years after uneventful implantation. Due to the long time period between operation and rotation, this is a very unusual complication. Regular follow-ups for several years are recommended.

Refractive

AddOn Toric IOL implantation for spherical and cylinder correction in the treatment of aniseikonia after penetrating keratoplasty

Presenting author: Iva Dekaris, Croatia

Session name: Case reports II - Refractive

Date and time: 10 October 2021, 08:00 - 09:30

Presentation time: 08:06 - 08:12

Location: Hall 9

Purpose:

To introduce the case of a 85-year-old male patient who underwent penetrating keratoplasty (PKP) in 2018. The high residual spherical (SPH) and cylindrical (Cyl) errors caused significant aniseikonia with the fellow eye. The condition could be corrected with the implantation of a 1stQ AddOn (1stQ GmbH, Mannheim, Germany) toric intraocular lens (IOL) implanted in the ciliary sulcus of the PKP eye.

Setting/ Venue:

University Eye Hospital Svjetlost Zagreb

Report of Case:

The left eye of the patient had undergone cataract surgery with phacoemulsification and penetrating keratoplasty in November, 2018. After the surgery, an uncorrected distance visual acuity (UDVA) of 1.0 logMAR, and a best corrected distance visual acuity (CDVA) of 0.3 logMAR could be measured. As the residual SPH and Cyl refractions were -11.0 dioptres (D) and -3.00 D, respectively (Spherical equivalent; SEQ= -12.5 D), and the fellow eye had a refractive error of SPH= -2.00 D and Cyl= -3.00 D (SEQ= -3.50 D, this eye also diagnosed with endotheliopathy), he was unable to wear glasses due to extreme aniseikonia. The decision was made to proceed with a supplementary AddOn IOL implantation into the ciliary sulcus of the PKP eye, in order to allow for better refractive balance between the two eyes, and to allow him to use spectacles. The patient had received a custom sulcus lens calculated by our surgical team with the assistance of the manufacturer. After uneventful AddOn IOL implantation, the patient had an UDVA of 0.2 logMAR already on the first postoperative day, while one month later the UDVA improved to 0.1 logMAR, and the patient is able to function without spectacles in his daily life.

Conclusion/Take Home Message:

Based on our experience, we believe that the 1stQ AddOn IOLs can be a life-changer for patients, increasing both their visual comfort and their quality of life, and at the same time they also represent a safe and efficient solution for cornea transplant surgeons.

Refractive

Occlusion of AquaPort Flow in a Case of Toxic Anterior Segment Syndrome Following Implantable Collamer Lens Surgery Causing Severe Pupillary Block

Presenting author: Jorge Alio del Barrio, Spain

Session name: Case reports II - Refractive

Date and time: 10 October 2021, 08:00 - 09:30

Presentation time: 08:12 - 08:18

Location: Hall 9

Purpose:

To present a case where following implantable collamer lens (ICL) implantation the patient developed toxic anterior segment syndrome (TASS) with a subsequent pupillary block as a consequence of the occlusion of the AquaPORT flow hole.

Setting/ Venue:

Cornea, Cataract and Refractive Surgery Unit, Vissum (Miranza Group), Alicante, Spain

Report of Case:

A V4c toric ICL was implanted in the left eye of a 32-year-old female. After one week the lens was 15° off axis and uneventful lens alignment correction was performed. At postoperative day 1 an intraocular pressure (IOP) of 11mmHg and mild corneal edema were observed. At postoperative day 7 there was a UDVA of 20/800, an IOP of 44 mmHg, diffuse corneal edema and fibrin strands in the anterior chamber. Toxic anterior segment syndrome (TASS) was diagnosed and topical steroids, cycloplegia, anti-glaucoma drops and oral acetazolamide were prescribed. At postoperative day 9 dispersed endothelial pigment with a fixed mid-dilated pupil were identified. Anterior segment optical coherence tomography showed strands of fibrin blocking the central ICL hole and angle closure. Pupillary block related to the fibrin occluded AquaPORT hole consecutive to TASS was diagnosed. The patient underwent ICL removal, but had a persistent an atonic, hyporeflexive pupil as a complication.

Conclusion/Take Home Message:

This case demonstrates that an AquaPORT hole may not be enough to prevent pupillary block in cases with severe postoperative intraocular inflammation, causing postoperative complications such as Urrets Zavalía Syndrome. Clinicians should consider this diagnosis in cases with corneal edema in the early postoperative period following AquaPORT ICL insertion.



39th Congress of the ESCRS

8 – 11
October 2021

Refractive

Mystery Of Uneventful 5 days Post Operative Femtolasik

Presenting author: Ashraf Armia Balamoun, Egypt

Session name: Case reports II - Refractive

Date and time: 10 October 2021, 08:00 - 09:30

Presentation time: 08:24 - 08:30

Location: Hall 9

Purpose:

A Male Patient age 28 years old went uneventful Femtolasik in both eyes. First day was completely normal with clear corneas and UCVA were 20/20 in both eye with no complain. On the 5th day starting to complain that the vision in his right eye decreasing. On examination the we noticed para central weird sub flap opacity that was capture by anterior segment photograph and vision was drop to 0.4 and high mixed astigmatism were detected because of the elevated flap at this area. Anterior OCT was done and reveled sub flap mass with no tracks well circumscribed.

Setting/ Venue:

Watany Eye Hospital WEH, Watany Research and Development Center WRDC, Cairo, Egypt

Report of Case:

So the plan was to evert the flap and see and remove all this mass. Marking on the size and the site of the mass was done with ink to localize it after I remove the flap. The flap were everted and mass were removed from both the back of the flap and the bed with total was and contact lens was used and removed 2 days after. Post operative clear cornea was back with UCVA were 20/20 again. Anterior OCT was done after 10 days to ensure that the space now is completely clear but were some epithelial thickness map changes in the thickness matching with the area were the mass were elevating the flap. I will include all the photography of pre and post management with the video of removing the mass.

Conclusion/Take Home Message:

Close follow up for uneventful lasik patient is very important and proper and rapid management should be done to ensure the best stable post operative results. Very important to make sure that you was good doing the operation as make sure of the weak epithelium.

Refractive

Treatment in a patient with Fuchs endothelial corneal dystrophy and radial keratotomy: A case report

Presenting author: Almudena Moreno Martinez, Spain

Session name: Case reports II - Refractive

Date and time: 10 October 2021, 08:00 - 09:30

Presentation time: 08:36 - 08:42

Location: Hall 9

Purpose:

To report the effectiveness of Descemet's membrane endothelial keratoplasty in a patient with Fuchs Endothelial corneal Dystrophy and radial keratotomy.

Setting/ Venue:

Department of Ophthalmology. Complejo Hospitalario Universitario de Albacete (CHUA), Spain.

Report of Case:

A 62-year-old woman, diagnosed with Crohn's disease, Fuchs Endothelial corneal Dystrophy (FED), ocular hypertension and myopia, who was operated on radial keratotomy as a refractive surgery when she was 40 years old. Twelve years later she had noncomplicated cataract surgery in both eyes (phacoemulsification with in-the-bag intraocular lens implantation). During the last follow-up visits she complained of persistent glare, halos and decreased vision, mainly in the morning with a mild improvement along the day. Ophthalmological examination showed a best corrected visual acuity (BCVA) of 20/50 right eye (OD) and 20/60 left eye (OS). Slit Lamp Biomicroscopy revealed radial keratotomy scars and severe guttata in both eyes, with corneal stroma edema in her left eye (OS). Goldmann applanation tonometry was 15 mmHgmm in her OD and 16 mm Hgmm in her OS. Hyperosmotic saline eye drops and ointment were added to her usual treatment (topical Brimonidine), without any improvement. An endothelial keratoplasty (Descemet's membrane endothelial keratoplasty-DMEK) was indicated as a surgical procedure for visual rehabilitation in her left eye. This surgery went uneventfully as planned (8.25 mm diameter graft) and there were no complications during the early postoperative period. After 3 months the patient had no visual complaints. The ophthalmological examination showed a BCVA of 20/25 left eye (OS). Slit Lamp Biomicroscopy revealed no changes in the radial keratotomy scars, a completely clear cornea and an endothelial graft with no pathological signs. Goldmann applanation tonometry was 16 mm Hgmm in her OS (Brimonidine and Timolol fixed combination eye drops). Specular microscopy (OS) presented an endothelial density of 1850 cells/mm², with a normal size and cell morphology. Anterior segment optical coherence tomography showed a well-positioned endothelial graft. Referring to corneal topography an important pachymetry decrease and an improvement in anterior regularity were observed relative to preoperative examinations, without other significant changes.

Conclusion/Take Home Message:

Descemet's membrane endothelial keratoplasty is a good treatment for patients with endothelial cell dysfunction and previous radial keratotomy. It results in better visual outcomes than other surgical procedures, with minimal changes in astigmatism and spherical equivalent, as long as a significant corneal irregularity secondary to the previous refractive surgery does not exist. It provides the most rapid visual rehabilitation of all the keratoplasty techniques.



39th Congress of the ESCRS

8 – 11
October 2021

Refractive

Traumatic corneal flap displacement 20 years after laser in situ keratomileusis

Presenting author: Catarina Castro, Portugal

Session name: Case reports II - Refractive

Date and time: 10 October 2021, 08:00 - 09:30

Presentation time: 08:42 - 08:48

Location: Hall 9

Purpose:

To report a case of a flap displacement following blunt ocular trauma 20 years after laser in situ keratomileusis (LASIK), its management and evolution.

Setting/ Venue:

Refractive Surgery Unit of Ophthalmology Department of Centro Hospitalar Universitário do Porto, Oporto, Portugal.

Report of Case:

We present a case of a healthy 38-year-old man, with a previous history of bilateral LASIK at the age of 18, that came to our emergency room (ER) with complaints of intense pain, photophobia and red eye after a blunt trauma with a wooden stick in the right eye, that occurred a few hours before. At presentation, visual acuity (VA) was 20/80 (Snellen Chart). On slit lamp examination he had conjunctival hyperemia, a central and superior area of de-epithelialization, a slight superior displacement of the corneal flap with microstriae and inflammatory infiltrate in the LASIK interface. The flap was repositioned in the ER and an eye patch with antibiotic ointment was placed. On the following day, the flap remained well positioned and the epithelial defect had improved. At this point topical moxifloxacin, clotrimazole and artificial tears were prescribed. Two days later, after complete healing of the epithelial defect, topical and oral prednisolone were added to treatment. In addition to the photographic documentation of the anterior segment and the assessment of visual acuity, visual quality was assessed with the HD AnalyzerTM technology. Corneal topography with the Oculus Pentacam[®] HR and corneal optical coherence tomography (OCT) with the SPECTRALIS[®] Anterior Segment Module were also obtained. During the 3 months follow-up, we observed a progressive improvement in VA and in the interface transparency, and the treatment was tapered. Additionally, a progressive improvement of the Objective Scatter Index (OSI) was noted. Anterior segment photographs, topography and OCT will be presented.

Conclusion/Take Home Message:

LASIK is one of the most performed refractive procedures worldwide. Despite the overall good results, the creation of LASIK flap makes it more susceptible to complications following ocular trauma, even after 20 years as in this patient's case. So, it is of utmost importance that patients are educated to use lifelong appropriate protection when participating in dangerous activities and that ophthalmologists are sensitized to make a thorough evaluation of the flap and LASIK interface when facing patients with history of ocular trauma, to detect even slight alterations that can greatly impact patient's visual acuity and quality.

Refractive

Management of corneal neovascularization in a radial keratectomy incision associated with lipid keratopathy

Presenting author: Kattayoon Kate Hashemi, Switzerland

Session name: Case reports II - Refractive

Date and time: 10 October 2021, 08:00 - 09:30

Presentation time: 08:48 - 08:54

Location: Hall 9

Purpose:

To describe the management of a case with corneal neovascularization in a radial keratectomy incision associated with lipid keratopathy.

Setting/ Venue:

Jules Gonin Eye Hospital, Lausanne, Switzerland.

Report of Case:

A 72-year-old female patient was referred for the management of lipid keratopathy in her left eye. Past medical history was significant for bilateral radial keratectomy 25 years ago and cataract surgery in both eyes. On presentation, best corrected visual acuity (BCVA) was 1.0 (decimal scale) in both eyes and slit lamp examination of the left eye revealed a vascular pannus in the periphery of the cornea and a superficial neovessel at the 3 o'clock incision associated with lipid deposits, extending 4.6 mm from the limbus. Topical treatment with dexamethasone 0.1% and tobramycin 0.3% (Tobradex, Novartis Pharma, Switzerland) was unsuccessful and since the lesion was affecting the visual axis, surgical management with a minimal intervention was decided. The neovessel was cauterized on an outpatient basis under topical anesthesia at the slit lamp biomicroscope using radiofrequency diathermy (Klöti, Oertli®, Switzerland). On the 4th month follow-up visit, complete resolution of the neovessel was observed and the lipid deposits were significantly decreased, while BCVA remained 1.0.

Conclusion/Take Home Message:

Corneal neovascularization and lipid keratopathy can be associated with radial keratectomy incisions. However, cauterization of the neovessels can be a simple, safe and successful technique for the management of such cases.



8 – 11
October 2021

Refractive

Small incision lenticule extraction (SMILE) retreatment to a patient with high residual refractive error after photorefractive keratectomy (PRK)

Presenting author: Vardhaman Kankariya, India

Session name: Case reports II - Refractive

Date and time: 10 October 2021, 08:00 - 09:30

Presentation time: 09:00 - 09:06

Location: Hall 9

Purpose:

To present a case of a small incision lenticule extraction (SMILE) retreatment to a patient with high residual refractive error after photorefractive keratectomy (PRK).

Setting/ Venue:

Asian Eye Hospital and Laser Institute, Pune, Maharashtra, India

Report of Case:

A thirty-six-year-old male underwent uneventful SMILE for the correction of his residual refractive error twelve years after PRK. Preoperatively, uncorrected distance visual acuity (UDVA) was counting fingers in both eyes. Corrected distance visual acuity (CDVA) was 20/20 at the right (-4.75 -2.50 x 180) and 20/30 at the left (-7.50 -1.00 x 160) eye due to amblyopia. Slit-lamp examination revealed mild corneal haze in both eyes. One month after SMILE, UDVA was 20/20 at the right and 20/30 at the left eye; post-PRK corneal haze had reduced. During the 4-year follow-up, UDVA remained stable and there were no complications.

Conclusion/Take Home Message:

SMILE could be a good alternative approach for retreatment to a post-PRK patient.



39th Congress of the ESCRS

8 – 11
October 2021

Refractive

Creation of small incision using CIRCLE software to manage suction loss during small-incision lenticule extraction (SMILE)

Presenting author: Dimitrios Liakopoulos, Greece

Session name: Case reports II - Refractive

Date and time: 10 October 2021, 08:00 - 09:30

Presentation time: 09:06 - 09:12

Location: Hall 9

Purpose:

To present a case of suction loss during small incision lenticule extraction (SMILE) successfully managed by small incision creation using Circle software.

Setting/ Venue:

Asian Eye Hospital and Laser Institute, Pune, Maharashtra, India

Report of Case:

A 26-year-old female presented for refractive error correction. SMILE was planned for both eyes. Towards the end of cap interface cut in her right eye, unstable suction resulting in intrusion of conjunctival tissue under the contact interface was noted. Although femtosecond laser application was completed, it was ineffective in creating the small incision. Circle software was used to create a 50° wide small incision (310° wide hinge) avoiding cap conversion to a flap. Lenticule extraction was performed through the new small incision and the procedure was completed uneventfully. Uncorrected distance visual acuity was 20/20 on first post-operative day.

Conclusion/Take Home Message:

Circle software can be successfully used after suction loss in SMILE for the creation of the small incision without cap-to-flap conversion allowing completion of the flapless SMILE procedure.



39th Congress of the ESCRS

8 – 11
October 2021

Refractive

The intrastromal lenticule implantation for advanced keratoconus

Presenting author: Olesia Ziatdinova, Russian Federation

Session name: Case reports II - Refractive

Date and time: 10 October 2021, 08:00 - 09:30

Presentation time: 09:12 - 09:18

Location: Hall 9

Purpose:

To demonstrate the technique of the intrastromal lenticule implantation with simultaneous corneal crosslinking for advanced keratoconus

Setting/ Venue:

Corneal lenticule was done by laser in artificial chamber. Central hole by manual corneal punch. The lenticule was storage in a riboflavin. The intrastromal corneal pocket by Visumax in the recipient cornea. The lenticule with a central hole was implanted

Report of Case:

Male, 34 years old with advanced keratoconus of the 4 stage and Vogt's striae. The left eye: minimal pachymetry 382 mkm, UCVA OS 0.16 and the central keratometry 61.0 D. On the first postoperative day the central corneal pachymetry flattened in 10 diopters. The thinnest corneal point become 457 micron. Then 6 month later the central corneal keratometry additionally flattened for 5 diopters. The vision increased for 20/70 with pin hole in Snellen chart.

Conclusion/Take Home Message:

The intrastromal lenticule with a central hole implantation for advanced keratoconus increases the corneal thickness and reduces the risk of the disease progression. This procedure increased pachymetry at the corneal paracentral zone and didn't rise keratometry power at the central optical pupil zone. This feature didn't worsen the visual acuity. The collagen crosslinking additionally improve the corneal strength. This technology is an alternative way to keratoplasty. The Rigid Gas-Permeable Contact lens should be used for vision improvement^{[1][2][3][4][5][6][7][8][9][10]}. The possibility to perform the hyperopic intrastromal lenticule can achieve the goal for thickening the peripheral cornea without increasing the central keratometric power without any manual trephine.

Refractive

New approach of Treatment of Keratoconus in Hydrops stage using Human Fresh Myopic Lenticule Implantation and Autologous Serum with SMILE surgery

Presenting author: Anita Syla Lokaj, Kosovo

Session name: Case reports II - Refractive

Date and time: 10 October 2021, 08:00 - 09:30

Presentation time: 09:18 - 09:24

Location: Hall 9

Purpose:

We present a case study of a 19-year-old patient with severe keratoconus and chronic hydrops with a corneal scar who was treated with human fresh myopic lenticule (FML) implantation and autologous serum.

Setting/ Venue:

Eye Hospital, Prishtina, Kosova

Report of Case:

A 19-year-old female patient with keratoconus, chronic hydrops cornea, thin cornea (378 μm), and mild dry eye symptoms consulted our clinic. Human fresh lenticule implantation was performed with small incision lenticule extraction (SMILE), and application of autologous serum was done postoperatively for 8 weeks. The protocol was registered on clinicaltrials.gov (ClinicalTrials Reg: NCT04594512). Results: The central corneal thickness improved on the same day of the surgery, and vision improved 1 week postoperatively. The corneal topography showed a significant decrease in the anterior K1 and K2 values. The graft in the recipient cornea was clearly visible on anterior segment optical coherence tomography. On the 2-year follow up, the central corneal thickness remained stable at 474 μm without any complications.

Conclusion/Take Home Message:

Conclusion: A human fresh lenticule was used in this lenticule implantation procedure with postoperative application of autologous serum on a patient with final stage of keratoconus which resulted in an increase in central corneal thickness and improvement in visual acuity without any complications. This procedure is a new way in the treatment of progressive keratoconus with minimally invasive methods and low cost compared to keratoplasty