

## Cataract

### Bilateral sequential cataract surgery with intraocular lens and in the bag OCT-guided new artificial iris implantation in a patient with congenital aniridia.

**Presenting author:** Natalia Lorenzana-Blanco, Spain

**Session name:** Case Reports I - Cataract

**Date and time:** 09 October 2021, 16:45 - 18:15

**Presentation time:** 16:45 - 16:51

**Location:** Hall 13 / Elicium Ballroom

#### **Purpose:**

To describe the surgical maneuvers performed in this complex clinical case and the good clinical evolution.

#### **Setting/ Venue:**

Fundación Jiménez Díaz University Hospital, Madrid (Spain).

#### **Report of Case:**

We report a clinical case of a 20-year-old female with suspected congenital aniridia that was referred to our department. Next generation sequencing analysis showed heterozygosity for the pathogenic variant c.781C>T;p.(Arg261\*) located in exon 10 of the PAX6 gen, consistent with clinical suspicion. Her visual acuity (VA) was hand motion in both eyes. Nystagmus was observed upon examination. On slit-lamp exam bilateral white cataracts, severe iris hypoplasia and stage 1 aniridia-associated keratopathy with conjunctivalization and neovascularization of the peripheral cornea were identified. Photographic images were collected during follow-up. A surgery consisting of lens aspiration and intraocular lens and iris prosthesis placement inside the capsular bag was performed under general anesthesia with the help of intraoperative optic coherence tomography (OCT). Video imaging were taken during surgery. After one year follow-up intraocular pressure remains stable (12 millimeters of mercury) and no worsening of the keratopathy has been detected. Her best corrected visual acuity improved to 20/400 after the surgical procedure.

#### **Conclusion/Take Home Message:**

The use of iris in the bag prosthesis relieves photophobia and maintains a risk similar to that of simple IOL implantation, as is the case with our patient. Checking that all the iris implant is inside the capsular bag is crucial in order to avoid postoperative complications such as glaucoma, uveitis and corneal decompensation. In this regard, the staining of the capsular bag at the end of the surgery is extremely weak and the use of intraoperative OCT can help us to verify the correct positioning.



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### Anterior Segment OCT is a Superior Imaging Modality Compared to Conventional Slit Lamp Examination for Identifying Retained Lens Fragments

Presenting author: Haseeb Akram, United Kingdom

**Session name:** Case Reports I - Cataract

**Date and time:** 09 October 2021, 16:45 - 18:15

**Presentation time:** 16:51 - 16:57

**Location:** Hall 13 / Elicium Ballroom

#### **Purpose:**

Patients typically present with a cloudy cornea and high eye pressure when there is a retained lens fragment following cataract surgery. Conventional teaching is to perform gonioscopy to identify the lens fragment on a slit lamp. This may be difficult to perform due to the decompensated cornea and poor view. We propose a superior method of lens fragment identification using anterior segment OCT (Optical Coherence Tomography).

#### **Setting/ Venue:**

Southend University Hospital, Mid and South Essex Foundation NHS Trust, UK

#### **Report of Case:**

An elderly myope presented with corneal oedema 2 weeks after routine cataract surgery in the right eye with best corrected visual acuity (BCVA) of 6/36. There was no background of Fuchs' endothelial dystrophy. Pre-operatively BCVA was 6/6. Dexamethasone 0.1% 6 times a day was continued and he was seen again 10 days later with BCVA of 6/60 and Intraocular Pressure (IOP) of 16mmHg. Around 2 months after his initial surgery, his BCVA was Counting Fingers (CF), his cornea was oedematous and no lens fragment could be found on conventional slit lamp examination or gonioscopy. Anterior Segment OCT revealed a retained lens fragment in the inferior angle. This was obscured on slit lamp examination by the severe corneal oedema as well as the senile corneal arcus which made it difficult to visualise the fragment. Anterior chamber washout was arranged 2 days later. Dexamethasone 0.1% 6 times a day was prescribed and further follow up has been arranged to determine if he would require endothelial keratoplasty.

#### **Conclusion/Take Home Message:**

Retained lens fragment is not uncommon and can be difficult to visualise in some patients especially if the cornea is already oedematous by the time they are seen after routine cataract surgery. Anterior OCT provides a definitive and valuable image of the retained fragment which can not be found conventionally. It is technically easier to perform than gonioscopy and can be done by a technician. A high index of suspicion for retained lens fragment and timely imaging could save a patient from such a severe complication as bullous keratopathy and preserve corneal endothelial function. This case would be of interest to any cataract surgeon managing retained lens fragments.



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### Management of Dense Cataract and Associated Ocular Features in a Patient with Mulvihill-Smith Syndrome: A Case Report and Review of Literature

Presenting author: Ali Devebacak, Turkey

**Session name:** Case Reports I - Cataract

**Date and time:** 09 October 2021, 16:45 - 18:15

**Presentation time:** 16:57 - 17:03

**Location:** Hall 13 / Elicium Ballroom

#### **Purpose:**

Mulvihill-Smith syndrome is a rare disease, characterized by premature aging and accompanying manifestations with some various ocular complications. There were 11 cases previously reported in the literature but no ocular surgery was mentioned before. We evaluated the results of comprehensive ocular examination and cataract surgery in our patient with Mulvihill-Smith syndrome who presented with bilateral total dense cataract.

#### **Setting/ Venue:**

18-year-old female patient presented with complaint of low vision and diagnosed as bilateral total dense cataract. Bilateral phacoemulsification cataract surgery was performed, the results and associated ocular features were evaluated with review of literature.

#### **Report of Case:**

At the initial presentation of the patient, she had visual acuity at the level of 2.0 logMAR due to total dense cataract in both eyes. Intraocular pressure and gonioscopic examination of both eyes were normal. Ocular ultrasonography revealed a complete posterior vitreous detachment in both eyes. The axial lengths measured by ultrasound biometry on the RE and LE were 19.94 and 19.98 mm, respectively. The average keratometry values were 44.5 and 44.75 diopters (D), and central corneal thicknesses were 546  $\mu\text{m}$  and 538  $\mu\text{m}$ , on the RE and LE respectively. Corneal endothelial cell density (cells/ $\text{mm}^2$ ) measurements in the RE and LE were 2181 and 2231. Tear break-up time was 8 seconds on both eyes. There were no findings in favor of meibomian gland dysfunction or dry eye in biomicroscopic examination. On the first postoperative day, both eyes had moderate corneal edema and descemet's membrane wrinkles. These were observed to regress at the first week controls. Intraocular pressure was within normal limits in the postoperative period. Postoperative fundus examination revealed no pathological findings, except for a few scattered dot hemorrhages and exudates, compatible with moderate non-proliferative diabetic retinopathy. At the postoperative 4th week, retinal thickness values were measured as 289  $\mu\text{m}$  in the right eye and 283  $\mu\text{m}$  in the left eye on optical coherence tomography. Best corrected visual acuities were 0.5 and 0.4 logMAR in the RE and LE, respectively. At the same visit, CCT was measured as 567  $\mu\text{m}$  on the RE and 559  $\mu\text{m}$  on the LE. Corneal endothelial cell density (cells/ $\text{mm}^2$ ) values were 1968 in the RE and 2131 in the LE.

#### **Conclusion/Take Home Message:**

In this case, we describe a new case (possibly twelfth) with Mulvihill-Smith syndrome, with our comprehensive ophthalmologic evaluation and results of the cataract surgery performed. Due to concerns about corneal endothelial cell density and fibroblast function, with the necessary precautions taken, surgery was accomplished safely.

## Cataract

### Visual results after bilateral implantation of a complementary IOL optic design, which ensures a continuous vision from far through near 33cm in a patient with bilateral AMD and subretinal fluid in the right eye.

**Presenting author:** Mustafa Kamal Hallak, Germany

**Session name:** Case Reports I - Cataract

**Date and time:** 09 October 2021, 16:45 - 18:15

**Presentation time:** 17:03 - 17:09

**Location:** Hall 13 / Elicium Ballroom

#### **Purpose:**

Demonstrating patient's satisfaction and functional visual acuity outcomes after cataract surgery using the novel Well Fusion™ optical system by implanting the SIFI Miniwell® + SIFI Miniwell PROXA® IOL, despite the presence of a bilateral AMD.

#### **Setting/ Venue:**

International Vision Correction Research Centre (IVCRC), Department of Ophthalmology, University Hospital Heidelberg, Germany

#### **Report of Case:**

We report on a 71-year-old patient with bilateral AMD and subretinal fluid in the right eye (OD) who underwent cataract surgery on both eyes (OU) at our clinic. The patient was implanted with a SIFI Miniwell PROXA® and a SIFI Miniwell® IOL in the right and left eye (OS), respectively. Pre-op UDVA OD 0.7logMAR, OS 0.8logMAR, pre-op CDVA OD 0,20 logMAR, OS 0,26 logMAR. Standard phacoemulsification was performed on both eyes without complications. Bevacizumab was injected to the right eye at the time of surgery. Visual acuity results after one week: UDVA OD 0.60logMAR, OS 0.24logMAR, OU 0.24logMAR, UNVA OD 0.40logMAR, OS 0.30logMAR, OU 0.30logMAR. Visual acuity results after 1 month: UDVA OD 0.60logMAR, OS 0.40logMAR, OU 0.34logMAR, UIVA OD 0.2logMAR, OS 0.10logMAR, OU 0.10logMAR, UNVA OD 0.20logMAR, OS 0.20logMAR, OU 0.12logMAR. The DCVA OD 0.30logMAR, OS 0.32logMAR, OU 0.30logMAR, DCIVA OD 0.20logMAR, OS 0.20logMAR, OU 0.11logMAR, DCNVA OD 0.30logMAR, OS 0.30logMAR, OU 0.30logMAR with a subjective refraction of OD -1.25/-0.50/170, OS -0.50/-0.50/2. The defocus curve showed a binocular visual acuity of 0.2 logMAR or better over a range of 4dpt. 2 further Bevacizumab injections into the right eye were performed at a 4-week interval. Nepafenac 0,3% eye drops 1x/d for 6 weeks were added. Further follow-up visits are scheduled in 3 and 6 Month post-op intervals.

#### **Conclusion/Take Home Message:**

Although the patient suffered a bilateral AMD und subretinal fluid in the right eye. The patient was satisfied with his post-op visual acuity outcome achieved by the SIFI Well Fusion™ optical system, especially in the intermediate and near distance. We expect further improvement once the subretinal fluid in the right eye is resolved.



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### Bilateral aqueous misdirection syndrome after years of uneventful phacoemulsification in angle closure patient

Presenting author: Houda Al-Ghaithi, Oman

**Session name:** Case Reports I - Cataract

**Date and time:** 09 October 2021, 16:45 - 18:15

**Presentation time:** 17:15 - 17:21

**Location:** Hall 13 / Elicium Ballroom

#### **Purpose:**

To report a case of bilateral aqueous misdirection syndrome after years of uneventful phacoemulsification surgery in angle closure patient.

#### **Setting/ Venue:**

Ophthalmology department at Al-Nahdha Hospital, Muscat, Sultanate of Oman.

#### **Report of Case:**

A 64 year old woman, known to have bilateral significant cataract and early primary angle closure glaucoma (PACG) with previous patent peripheral iridotomy (PI) at both eyes. Cataract surgery was indicated to improve patient's visual acuity. After two and half years of the uneventful phacoemulsification, the patient presented with a left eye refractive shift, shallow anterior chambers (AC) and elevated intraocular pressure (IOP) despite the presence of a patent PI. The effect of antiglaucoma medications and topical atropine was temporary. The presence of patent PI alone had no effect on the fluctuations of the IOP, so laser augmentation of the PI was done followed by laser anterior hyaloidotomy. The patient refused any surgical intervention. The same presentation happened recently to the right eye, five years after the uneventful phacoemulsification, and with antiglaucoma medications and topical atropine the condition settle until now. Patient refused any laser sessions or surgical interventions to the right eye.

#### **Conclusion/Take Home Message:**

Aqueous misdirection syndrome, also known as malignant glaucoma, is a form of secondary angle closure glaucoma marked by a triad of elevated IOP, myopic shift in refraction and central shallowing of the AC despite the presence of a patent PI and absence of suprachoroidal hemorrhage. It can occur after hours to months or rarely years of any intraocular surgery, including phacoemulsification, specially in patients with a history of narrow or closed angle glaucoma. Both eyes of our patient presented with shallow AC after years of uneventful phacoemulsification, which confirms the fact that having patent PI preoperatively doesn't prevent aqueous misdirection syndrome. Therefore, antiglaucoma medications and topical atropine can be considered as first line management of aqueous misdirection syndrome. Laser augmentation of PI with anterior hyaloidotomy is preferable management for aqueous misdirection syndrome and can prevent any further fluctuations in IOP, specially in cases were the patient refuses any surgical interventions.



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### Bilateral choroidal detachment associated with carbonic anhydrase inhibitors administration after cataract surgery

Presenting author: MARÍA VICTORIA DE ROJAS, Spain

Session name: Case Reports I - Cataract

Date and time: 09 October 2021, 16:45 - 18:15

Presentation time: 17:21 - 17:27

Location: Hall 13 / Elicium Ballroom

#### Purpose:

To present a rare adverse effect of topical and oral carbonic anhydrase inhibitors (CAI) after cataract surgery: the development of bilateral choroidal detachment.

#### Setting/ Venue:

Victoria de Rojas Instituto Oftalmológico

#### Report of Case:

A 72 year old man was referred for cataract surgery. His preoperative workup revealed cataract in both eyes, with normal intraocular pressure and fundus examination. Axial length was 24.57 mm OD and 24.63 mm OS. Phacoemulsification and IOL implantation were performed uneventfully under topical anesthesia in his left eye. The next day his uncorrected distance visual acuity (UCDVA) was 20/20, biomicroscopic examination was normal but IOP reached 38 mmHg. The patient was treated with two doses of oral acetazolamide 250 mg every 12h and a combination of topical timolol/dorzolamide. IOP decreased to 20 mmHg and one day later, phacoemulsification and IOL implantation was performed uneventfully in the right eye and a single dose of acetazolamide 250 mg was prescribed after surgery to prevent IOP rise, together with timolol/dorzolamide combination in the right eye. In the first postoperative visit, 24 h later, UCDVA was 20/20 in the right eye and 0.400 in the left eye which improved to 20/20 with -1.5 -0.75 x 85. Biomicroscopic examination was within normal limits in the right eye, however, the left eye showed a narrow anterior chamber; IOP was 27 mmHg in the right eye and 12 mmHg in the left eye. Fundus examination was normal in the right eye, but revealed inferior and nasal serous choroidal detachments in the left eye which were confirmed by ultrasound B-scan. An idiosyncratic reaction to carbonic anhydrase inhibitors was suspected and the topical timolol/dorzolamide combination was stopped. One day later, choroidal detachments associated with a myopic shift were detected in the right eye as well. The choroidal detachments and myopic shift progressively disappeared within 5 days in both eyes with final UDVA of 20/20, IOP of 10 mmHg without treatment, and normal fundus examination in both eyes.

#### Conclusion/Take Home Message:

Although extremely rare, carbonic anhydrase inhibitors may cause an idiosyncratic reaction that can result in the development of choroidal detachment and myopic shift after cataract surgery and physicians must be aware of this possibility; a high level of suspicion is necessary to avoid delay in diagnosis and treatment of this unusual complication. Authors have no financial interest relevant to this case



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### Total choroidal detachment following 4 ports foldable IOL scleral fixation

**Presenting author:** Zeineb Salem, Tunisia

**Session name:** Case Reports I - Cataract

**Date and time:** 09 October 2021, 16:45 - 18:15

**Presentation time:** 17:27 - 17:33

**Location:** Hall 13 / Elicium Ballroom

#### **Purpose:**

To report a case of total choroidal detachment following 4-ports scleral fixated IOL.

#### **Setting/ Venue:**

Department of Ophthalmology, Fattouma Bourguiba Hospital, Medical University of Monastir

#### **Report of Case:**

A 30-year-old-man presented to our department after blunt ocular trauma. He underwent cataract surgery with implantation of a polymethylmethacrylate (PMMA) lens. During the follow-up period, a lens dislocation occurred. Thus, a second surgery was performed: 23 gauge 3-port complete pars-plana vitrectomy followed by removal of the dislocated lens and implantation of foldable-IOL scleral fixated by 8-0 prolene through 4 scleral ports. One day post-operatively was uneventful and the patient was discharged under topical steroid and antibiotic medication. Seven days later, the patient presented with sudden decrease of vision. His visual acuity was limited to hand motion. On slit-lamp examination, the anterior segment was clear and quiet, the IOL was well-centered with a total choroidal detachment, visible behind the IOL. Intra-ocular pressure was 03 mmHg. B-mode ultrasonography confirmed the presence of a total choroidal detachment with "a kissing sign". A leakage from one scleral suture was suspected. Patient underwent medical therapy including systemic and topical steroids in addition to atropin but without any improvement. A continuous eye patch occlusion was then performed and maintained for 72 hours. Topical medications were interrupted. A progressive resolution of the choroidal detachment was then noticed. The uveal effusion completely resolved within 15 days. Final visual acuity was 20/30.

#### **Conclusion/Take Home Message:**

Total choroidal detachment may complicate 4 ports foldable IOL scleral fixation. This condition may be the consequence of a leakage from the sclerotomies and might be successfully managed with continuous eye patching.

## Cataract

### Persistent ocular hypotony- the fine line between iatrogenic and idiopathic cyclodialysis

**Presenting author:** Maria Dudau, Romania

**Session name:** Case Reports I - Cataract

**Date and time:** 09 October 2021, 16:45 - 18:15

**Presentation time:** 17:33 - 17:39

**Location:** Hall 13 / Elicium Ballroom

#### **Purpose:**

The aim is to assess the surgical outcome in a case of bilateral panuveitis complicated by secondary hypotony following iatrogenic cyclodialysis in a 46-year-old female patient with no previous medical history.

#### **Setting/ Venue:**

Cataract Department, Emergency Eye Clinical Hospital, Bucharest, Romania

#### **Report of Case:**

The following case consists of a 46-year-old female known with hypermetropia and previous pupillary mechanical bilateral dilation for posterior synechiae. Following a full ophthalmologic examination, best corrected visual acuity (BCVA) was 6/18 in the right eye (RE) and 6/24 in the left eye (LE) and intraocular pressure (IOP) was 9 mmHg (RE) and 6 mmHg (LE). The slit-lamp examination showed bilateral complicated cataract and papillary edema with inflammatory echoes and choroidal edema in B-mode ultrasound. The initial diagnosis was bilateral chronic panuveitis associated with ocular hypotony. In order to identify the cause of panuveitis, rheumatological and infectious diseases consults were conducted. Following extensive preoperative examination, no conclusive etiology was identified, yet the visual acuity was continuously decreasing with evolving opacification of the lens. Ultrasound Biomicroscopy (UBM) found 180-degree cyclodialysis in the right eye, and 360-degree in the left eye, most probably secondary to previous mechanical pupillary dilation. The surgical procedure in both eyes consisted of cataract extraction using phacoemulsification and posterior chamber IOL implantation along with capsular tension rings (CTRs) insertion. In the left eye, endocyclohexy was performed using a CTR that was anchored to sclera. The multiple surgical procedures led to both raising of the intraocular pressure and decreasing of secondary papillary edema, with no inflammatory response.

#### **Conclusion/Take Home Message:**

Given the variety of factors that could have contributed to this ocular complication, identification of risk factors for hypotony is crucial for the development of better preventive and therapeutic approaches. The hypotony due to cyclodialysis is a challenge in terms of clinical diagnosis and surgical treatment, with no conclusive guidelines being available at this moment. Our patient has stable IOP and visual acuity for the last two years, without major complications.



## Cataract

### Dealing with subluxated traumatic cataract and flanged intrascleral PC IOL fixation with double needle technique

**Presenting author:** Miroslav Stamenkovic, Serbia

**Session name:** Case Reports I - Cataract

**Date and time:** 09 October 2021, 16:45 - 18:15

**Presentation time:** 17:45 - 17:51

**Location:** Hall 13 / Elicium Ballroom

#### **Purpose:**

To report clinical evaluation and treatment of patient with subluxated traumatic cataract

#### **Setting/ Venue:**

Clinic for Eye Disease "Prof. Dr Ivan Stankovic" University Medical Center "Zvezdara".

#### **Report of Case:**

A 64 year-old male patient presented with a history of blunt trauma to the right eye while chopping wood. Patient's initial best corrected visual acuity (BCVA) on injured eye was 5/60. Further examination revealed subluxated traumatic cataract with "sunset" sign. There were no adjacent ocular trauma. Intraoperatively major phacodonesis was noted. After creating main incision, capsulorexis and gentle hydrodissection were done. As a support modified 30G needle was introduced through pars plana. After that phacoemulsification was performed. Because capsular bag was dislocated posterioerely with no satisfactory zonullar support it was removed. No visible vitreous loss was noted. Two sclerotomies at 3 and 9 o'clock were performed using 30G needle at 2mm from the limbus. 3-piece IOL was inserted in the anterior chamber and the leading and trailing haptics were inserted into the lumen of the needles. Both haptics were externalized onto the conjunctiva using the double needle technique. The end of the haptics are cauterized to make a flang with a diameter of 0.3 mm. The flang of the haptics is pushed back and fixed into the scleral tunnel. First postoperative day there was no evident corneal oedema, pupil was regular and IOL was well positioned without tilt. Subsequently regular controls were made at 3,6,9 and 12 months. On those con-trols BCVA, IOP control and fundus examination were performed as well as OCT AS in order to evaluate intrascleral position of haptics. BCVA after one year was 0,8 with -0,5 cylinder.

#### **Conclusion/Take Home Message:**

Traumatic subluxated cataracts can be successful treated with standard phacoemulsification followed by sutureless intrascleral flange fixation of PC IOL. Although there are other surgical options for treating this kind of problem, we believe that phacoemulsification with flanged intrascleral IOL fixation is sup-erior method due to excellent postoperative results, long term IOL haptic fixation and low risk of intraoperative and postoperative complications



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### Management of repeated IOL dislocation after complicated cataract surgery and secondary sutureless lens fixation using the Carlevale IOL -a case report

**Presenting author:** Klaudia Kostolna, Austria

**Session name:** Case Reports I - Cataract

**Date and time:** 09 October 2021, 16:45 - 18:15

**Presentation time:** 17:51 - 17:57

**Location:** Hall 13 / Elicium Ballroom

#### **Purpose:**

To present the management of a case of complicated cataract surgery requiring multiple approaches of lens refixation.

#### **Setting/ Venue:**

Outpatient and inpatient clinic for cataract and IOL surgery in a tertiary referral hospital in Vienna, Austria.

#### **Report of Case:**

We present a 68-year-old male patient without any eye co-morbidities who underwent routine cataract surgery in May 2017. During the procedure, the 30-gauge cannula loosened during hydration of the corneal incisions, resulting in radial tear of the anterior capsule, rupture of the posterior capsule and vitreous bleeding. The patient was left aphakic after anterior vitrectomy and lens explantation. After three weeks, a 23-gauge vitrectomy with cryopexy and gas tamponade of a retinal detachment was performed and a three-piece IOL was implanted in the sulcus (ZA9003, Amo Johnson & Johnson, Germany). After four weeks, additional repositioning surgery had to be performed due to iris capture. Due to progressive IOL dislocation over the next year, sutureless IOL re-fixation surgery of the same three-piece IOL using scleral pockets as described by Scharioth et al. was performed in August 2019. Soon after the Scharioth maneuver, a haptic broke on one end, requiring another revision. Due to chronic cystoid macula edema, and the fact that the patient refused to be re-operated, surgery was postponed for a year. The ZA9003 IOL was extracted, and a single piece hydrophilic acrylic lens was implanted (Carlevale IOL, Soleko, Italy). The patient received sub-tenon triamcinolone at the end of surgery. A month later, the scleral pockets and the conjunctiva melted away and the haptics of the Carlevale were lying exposed over the sclera. Scleral patch surgery had to be performed to avoid endophthalmitis. The postoperative course after the final intervention was good regarding the lens positioning. However, the visual acuity remained 0.1 (Snellen 6m) due to effects of chronic Irvine Gass syndrome.

#### **Conclusion/Take Home Message:**

A loosened cannula during hydration of corneal incisions, the last step of routine cataract surgery, can lead to several complications, requiring multiple revision surgeries. Sutureless, trans/intrascleral re-fixation of a three-piece sulcus lens poses the risk of haptic damage and can lead to a broken or bent haptic after surgery. Lastly, scleral thinning should be considered when implanting haptics with scleral fixation in eyes that underwent repeated pars-plana vitrectomies. Additionally, the use of sub-tenon washed triamcinolon made the matter worse. Thus, location and position of intra-scleral haptics should be monitored closely in such cases.

## Cataract

### Recurrent dislocation with spontaneous repositioning of a sulcus-fixated intraocular lens by head movement and tilting.

**Presenting author:** Matthew O'Riordan, United Kingdom

**Session name:** Case Reports I - Cataract

**Date and time:** 09 October 2021, 16:45 - 18:15

**Presentation time:** 17:57 - 18:03

**Location:** Hall 13 / Elicium Ballroom

#### **Purpose:**

To report a case of a sulcus-fixated intraocular lens (IOL) undergoing recurrent subluxation and repositioning brought about by head movements and tilting by the patient. The superior haptic was transixed to the sclera by a single nonabsorbable suture at the 12 o'clock position with good visual outcome.

#### **Setting/ Venue:**

Eye unit at the University Hospital Plymouth NHS Trust, Plymouth, United Kingdom.

#### **Report of Case:**

An 86 year old man presented with a three year history of recurrent and transient episodes of monocular diplopia and blurred vision in his left eye. This was triggered by sudden head movements, or by sneezing and coughing. Rarely this happened without any cause. He could regain normal vision by tilting and rotating his head repeatedly until the symptoms resolved. 20 years previously, he had a sulcus-fixated IOL inserted after a complicated left eye phacoemulsification cataract surgery with posterior capsule rupture and vitreous loss. He had sought help in the past for fixing the IOL, but he was persuaded against it due to low endothelial cell count. He presented three years later whereby he was unable to reposition the lens by his usual head manoeuvre. On examination his left IOL was dislocated with the superior haptic visible in the visual axis. The haptic was transixed to the sclera at the 12 o'clock position with a single 10-0 polypropylene suture. At follow up visit, the IOL was well-centred and without complication.

#### **Conclusion/Take Home Message:**

Suture breakage with IOL dislocation is a recognised long-term complication of sulcus fixated-IOL implantation. This is the first reported case whereby a patient could spontaneously reposition his IOL through head movements. Suturing the dislocated haptic into position can achieve a good visual outcome if the patient can no longer reposition the IOL or prefers surgical correction.



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### Double-flanged capsule tension ring fixation in a patient with subluxated lenses

**Presenting author:** Daria Dibina, Russian Federation

**Session name:** Case Reports I - Cataract

**Date and time:** 09 October 2021, 16:45 - 18:15

**Presentation time:** 18:03 - 18:09

**Location:** Hall 13 / Elicium Ballroom

#### **Purpose:**

To report a case of double - flanged standard capsule tension ring (CTR) fixation in a patient with subluxated lenses and to assess the clinical and functional results of this surgical technique

#### **Setting/ Venue:**

S. Fyodorov Eye Microsurgery Federal State Institution, Moscow, Russia

#### **Report of Case:**

A 54-year-old woman presented with visual impairment in both eyes. Examination of the anterior segment showed microspherophakia and superior zonular weakness in both eyes. Preoperatively BCVA was 20/32 with sph -9.0,cyl -1.0 ax 30degrees on the right eye and 20/32 with -7.0,cyl -1.0 ax150 degrees on the left eye. Treatment was performed in both eyes. There was a 1-month interval between surgeries. Surgical technique included routine corneal incisions, filling of the anterior chamber with an ophthalmic viscosurgical device. After creating a capsulorhexis capsular hooks were inserted to support the capsular bag. Then cataract was removed. Then one of the end of 6.0 polypropylene monofilament was placed into one of the hole of CTR and was heated by thermocautery and shaped into a flange. This complex was inserted into the capsular bag and the edges of the CTR was located in the weakest zonular quadrant. Final fixation of the CTR was achieved via the creation of a sclerotomy approximately 2.0 mm from the limbus in the same quadrant of the zonular weakness using a 30-gauge needle. The needle transferred the capsular bag and other end of the polypropylene monofilament was placed into the 30-gauge needle's inner cavity, the needle was used as an external guide of the end of the monofilament within the sclera. Then the second polypropylene end was cut 5mm from the base and, shaped into a flange by the thermocautery and inserted into the sclera. Afterwords, the single-piece monofocal IOL was implanted in the capsule bag following standard protocol. There were no intraoperative complications. In the end of the operation the capsule bag was stable and IOL was well-centered. Postoperatively BCVA was 20/25 with sph-4.0 on right eye and 20/25 with sph-3.5 on the left eye. IOP were 14 and 15mm Hg respectively. Ultrasound biomicroscopic examination showed stable positing of the "IOL-capsule bag "complex and the monofilament passing through the ciliary sulcus.

#### **Conclusion/Take Home Message:**

The patients with weak or missing zonules are at higher risk of complications during and after cataract surgery. Modified capsular tension rings and capsular tension segments provide a better opportunity to successfully manage these cases and allow for implantation of an IOL into the capsular bag. Unfortunately, this devices aren't registered for clinical application in Russian Federation. In our opinion, double-flanged capsule tension ring fixation in a patient with subluxated lenses is an effective alternative with good "IOL-capsule bag complex" stability and visual acuity results. Further studies with more patients and longer follow-ups are needed to determine its safety and efficacy