



# 2 nd Balkan Ophthalmology Meeting

in conjunction with

4th KAO
National Congress



## 25-26 October 2024

Hotel Emerald Prishtina, Kosovo



## **Committees**

Organizing and Scientific Committee		
Kosovo	Türkiye	
Naser Salihu	Huban Atilla	
Burim Zhuri	Banu Turgut Öztürk	
Mentor M. Gorani	Hakan Özdemir	
Belinda Pustina	Suzan Güven	
	Gamze Uçan Gündüz	
	Kıvanç Güngör	

25 - 26 October, 2024 Hotel Emerald, Pristina, Kosovo



## **Scientific Program**

25 October 2024, Friday

### HALL A

09.00 – 10.00	YOUNG OPHTHALMOLOGIST SESSION Moderators: Dr. Banu Turgut Öztürk, Dr. Belinda Pustin	
	If I am born again, I will be an ophthalmologist again. Why I chose ophthalmology?	Dr. Baran Özdemir
	Navigating ophthalmology through VUCA with peripheral vision	Driton Selimi
	Al in Ophthalmology	Dr. Hakan Özdemir
	The effect of Visual Screens on Vision of adolescents	Dr. Tundjai Jozturk
10.00 - 10.30	OPENING CEREMONY Dr. Naser Salihu - President of KAO Dr. Huban Atilla - President of Turkish Ophthalmological Association Arben Vitia - Minister of Health in the Republic of Kosovo HE Mr. Tunç Angılı - Ambassador of the Republic of Türkiye Music Performance: Dr. Elçin Sürer, Dr. Sait Eğrilmez, Dr Gürkan Erdoğan, Dr. Gafurr Murat Dr. Valbon Ajazi	
10.30 - 11.00	COFFEE BREAK	
11.00 - 12.15	Cataract session I Moderators: Dr. Gabor Scharioth, Dr. Banu Coşar, Dr. Athanasios Nikolakopoulos	
	Low intraocular pressure, microincissional cataract surgery	Dr. Gabor Scharioth
	Treatment of residual refraction after trifocal lens implantation	Dr. Banu Coşar
	OSD, Cataract and Refractive surgery	Dr. Minir Asani
	Intrascleral haptic fixation	Dr. Gabor Scharioth
12.15 - 12.30	Discussion	
	LUNCH BREAK	

# 2<sup>nd</sup> Balkan Ophthalmology Meeting

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4 KAO National Congress

25 - 26 October, 2024 Hotel Emerald, **Pristina, Kosovo** 



13.30 - 14.45	Recent advances in glaucoma diagnosis and treatment Moderators: Dr. Tekin Yaşar, Dr. Pajtim Lutaj, Dr. Mentor Gorani		
	How do I monitor my glaucoma patient with OCT	Dr. Tülay Şimşek	
	Gonioscopy in MIGS Era	Dr. Atilla Bayer	
	Microinvasive Glaucoma Surgery	Dr. Pajtim Lutaj	
	Neovascular Glaucoma	Dr. Ümit Ekşioğlu	
	Personalized glaucoma treatment	Dr. Kıvanç Güngör	
14.45 - 15.35	SATELLITE SYMPOSIUM ROCHE Moderator: Dr. Naser Salihu		
	Bridging Research with Reality: The overall impact of Faricimab	Dr. Nenad Vukojevic	
	The power of dual mechanism of action	Dr. Afrim Shabani	
15.35 - 16.50	Medical Retina Moderators: Dr. Nurten Ünlü, Dr. Emina Kujundzic, Dr. Vesna Dimovska		
	OCT Biomarkers in Retinal Diseases	Dr. Sibel Kadayıfçılar	
	New Terminology in Age-related Macular Degeneration	Dr. Nurten Ünlü	
	VEGF Treatment Modalities - Current and Future Perspectives	Dr. Vesna Dimovska	
	Novel Drug Delivery Systems in Retinal Diseases	Dr. Gamze Uçan Gündüz	
	Uveitis Masquerade Syndrome	Dr. Nenad Vukojevic	
16.50 – 17.15	COFFEE BREAK		
17.15 - 18.15	Vitreoretinal Surgery - I Moderators: Dr. Borna Saric, Dr. Süleyman Kaynak, Dr. Tomi	slav Jukic	
	Classic technique in Retinal Detachment cases: Medical and Economic Points	Dr. Süleyman Kaynak	
	Surgery for congenital vascular malformations of the retina and choroid	Dr. Borna Saric	
	Scleral buckling surgery-is it outdated?	Dr. Tomislav Jukic	
	Nucleus and Intraocular Lens Dislocations	Dr. Gürkan Erdoğan	
	Suggestions in treating cataract complications on the table, for cataract surgeon	Dr. Athanasios Nikolakopoulos	

KAO
National Congress

**25 - 26 October, 2024** Hotel Emerald, **Pristina, Kosovo** 



## **Scientific Program**

25 October 2024, Friday

### HALL B

11.00 - 12.15	Young Ophthalmologist Free Paper Session, (7minutes/speaker) Moderators: Dr. Ben Asani, Dr. Yllke Salihu, Dr. Onur Konuk	
OP-01	Suprachorioidal Implantation of Slow-Release Corticosteroid Implants for the Treatment of Cystoid Macular Edema	Ben Asani
OP-02	Crystalline Keratopathy	Yllke Salihu
OP-03	Is a Suitable and Economical Approach Possible for In-vitro Studies of Corneal Epithelium?	Ayse Bozkurt Oflaz
OP-04	Long-term Clinical and Visual Outcomes in Ocular Rosacea	Gülce Kayıkçı
OP-05	How Does the Presence of Pterygium Affect the Ocular Surface and Dry Eye Symptoms in Patients with Dry Eye Disease?	Bilge Tarım
OP-06	Central Retinal Vein Occlusion Accompanied by Cilioretinal Occlusion	Endrit Sheremeti
OP-07	Our First Experience in Treatment of Macular Hole	Ardian Shabani
OP-08	Clinical Features and Outcomes of Pars Plana Vitrectomy for Retained Lens Fragments after Phacoemulsification	Sule Acar Duyan
OP-09	Refractive Surgery: A New Perspective on Vision Correction	Kreshnik Pollozhani
OP-10	Could Intraoperative Floppy Iris Syndrome (IFIS) Be Predicted by Pupillometry?	Dilara Özkoyuncu Kocabaş
OP-11	NAION and Pseudo Foster Kennedy Syndrome - Case Report	Fahrudin Ilazi
OP-12	Papiledema in Idiopathic Intracranial Hypertension	Dardan Sheremeti
OP-13	The Importance of Topography for Medical Board Examination and Detection of Corneal Refractive Surgery	Yusuf İkbal Erdoğdu
13.30 - 15.00	FREE PAPERS – I Moderators: Dr. Sait Eğrilmez, Dr. Burim Zuri	
OP-14	Our Experience in Multifocal Implantation After Cataract Surgery and Clear Lens Extraction	Burim Zhuri

# 2<sup>nd</sup> Balkan Ophthalmology Meeting

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4 KAO
National Congress

25 - 26 October, 2024

Hotel Emerald, Pristina, Kosovo



OP-15	Phakic Lenses (ICL/PCL) in Correction of Refractive Anomalies	Stela Ceca
OP-16	Clinical Outcomes of a New Monofocal Intraocular Lens in Patients Undergoing Phakovitrectomy for Idiopathic Epiretinal Membrane	Gentian Bajraktari
OP-17	A Modification of the Intraocular Lens Blocking Technique Without Posterior Capsulorhexis for Intraocular Foreign Body Removal	Sevim Ayça Seyyar
OP-18	Macular Hole Surgery Without Postoperative Head Positioning: A Technique of Viscoelastic Device Injection Covering the Temporal Internal Limiting Membrane Flap	Oğuzhan Saygılı
OP-19	Effect of Intravitreal Sulfur Hexafloride (SF6) Injection in The Management of Vitreomacular Traction	Oğuzhan Özçelik
OP-20	Temporal Inverted Internal Limiting Membrane Flap Technique versus Conventional Internal Limiting Membrane Peeling Technique for Large Macular Holes	Gülay Güler Canözer
OP-21	Outcomes of Vitrectomy in Macular Hole Surgery	Ilir Osmani
OP-22	Comparison of Clinical Outcomes of Three Different Suture Techniques in Upper Eyelid Blepharoplasty	Ali Karnaz
OP-23	Evaluation of Botulinum Toxin A injection Complications in Cosmetic Application	Erol Dülger
OP-24	Evaluation of the Change in the Epiphora After Blepharoplasty in Patients With Dermatoschalasis in the Long Term	Demet İyidoğan
OP-25	Compression Dressing Versus Non-compression Eye Pad after Blepharoplasty	Fatma Poslu Karademir

**25 - 26 October, 2024**Hotel Emerald, **Pristina, Kosovo** 



## **Scientific Program**

26 October 2024, Saturday

### HALL A

09.00 - 10.15	Cornea and Ocular Surface Moderators: Dr. Dilek Dursun Altınörs, Dr. Daniel Meller, Dr. Yehia Salah Mostafa		
	Simple Limbal Epithelial Transplantation for Ocular Surface Reconstruction	Dr. Daniel Meller	
	Current dry eye treatment	Dr. Sait Eğrilmez	
	Keratoconus and Crosslinking Treatment	Dr. Dilek Dursun Altınörs	
	Hot keratoplasty for corneal infections	Dr. Yehia Salah Mostafa	
	Keratopigmentation: Evolution of Techniques and Future Horizons	Dr. Mahmut Kaşkaloğlu	
10.15 - 11.15	.15 - 11.15 Cataract and Refractive Surgery Moderators: Dr. Vladimir Pfeifer, Dr. Christian Grupcheva, Dr. Kıvanç Güngör		
	Iridoplasty a useful tool for the anterior segment surgeon	Dr. Yehia Salah Mostafa	
	Secondary IOL implantation	Dr. Vladimir Pfeifer	
	Refractive intraocular lens exchange	Dr. Alina Gheorghe	
	3D Surgery in Ophthalmology	Dr. Christina Grupcheva	
11.15 - 11.45	COFFEE BREAK		
11.45 - 12.30	Uveitis Moderators: Dr. Nilüfer Yalcindağ, Dr. Nenad Vukojevic, Dr. Vlatk	cindağ, Dr. Nenad Vukojevic, Dr. Vlatka Saric	
	Diagnosis and management of non-infectious uveitis	Dr. Suzan Güven	
	Pediatric Non-infectious Uveitis	Dr. Nilüfer Yalçındağ	
	Viral Retinis	Dr. Vlatka Saric	
12.30 - 13.30	LUNCH BREAK		
13.30 - 15.00	Vitreoretinal Surgery - II Moderators: Dr. Hakan Durukan, Dr. Angelina Miereles, Dr. Xhevat Lumi		
	Myopic Tractional Maculopathy	Dr. Angelina Miereles	
	Outcomes of New Peeling Techniques for macular pucker	Dr. Xhevat Lumi	

# 2<sup>nd</sup> Balkan Ophthalmology Meeting

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4 KAO
National Congress

25 - 26 October, 2024

Hotel Emerald, Pristina, Kosovo



	Management of combined traumatic dislocation crystalline lens and traumatic mydriasis	Dr. Xhevat Lumi
	Ocular Trauma Affecting the Posterior Segment	Dr. Hakan Durukan
	Prophylactic chorioretinotomy in high risk of ocular traumas	Dr. Angelina Miereles
	Management of ocular trauma asociated with catararact and IOFB	Dr. Naser Salihu
15.00 - 16.15	Oculoplastics Moderators: Dr. Brigita Drnovšek Olup, Dr. Şeyda Karadeniz Uğurlu, Dr. Kelmend Spahiu	
	Complex surgical treatment of Blepharophymosis syndrome (BPES)	Dr. Brigita Drnovšek Olup
	Ptosis Surgery	Dr. Suat Hayri Uğurbaş
	Esthetic and Functional Eyelid Surgery	Dr. Onur Konuk
	Management of Lower Eyelid Malposition	Dr. Şeyda Karadeniz Uğurlu
	Etiological classification of ptosis	Dr. Kelmend Spahiu
	COFFEE DDFAV	
16.15 - 16.45	COFFEE BREAK	
16.15 - 16.45 16.45 - 17.15	SATELLITE SYMPOSIUM ALCON Moderator: Dr. Ariana Kelmendi	
	SATELLITE SYMPOSIUM ALCON	Dr. Andrzej Dmitriew
	SATELLITE SYMPOSIUM ALCON Moderator: Dr. Ariana Kelmendi	Dr. Andrzej Dmitriew Dr. Iva Kumpar Plese
	SATELLITE SYMPOSIUM ALCON Moderator: Dr. Ariana Kelmendi  Different IOL solutions for Presbyopia connections	Dr. Iva Kumpar Plese
16.45 - 17.15	SATELLITE SYMPOSIUM ALCON Moderator: Dr. Ariana Kelmendi  Different IOL solutions for Presbyopia connections  Argos CAS - more than optical biometer  Pediatric Ophthalmology and Strabismus	Dr. Iva Kumpar Plese
16.45 - 17.15	SATELLITE SYMPOSIUM ALCON Moderator: Dr. Ariana Kelmendi  Different IOL solutions for Presbyopia connections  Argos CAS - more than optical biometer  Pediatric Ophthalmology and Strabismus Moderators: Dr. Huban Atillla, Dr. Nikolas Kozeis, Dr. Yaşar Duranc	Dr. Iva Kumpar Plese
16.45 - 17.15	SATELLITE SYMPOSIUM ALCON Moderator: Dr. Ariana Kelmendi  Different IOL solutions for Presbyopia connections  Argos CAS - more than optical biometer  Pediatric Ophthalmology and Strabismus Moderators: Dr. Huban Atillla, Dr. Nikolas Kozeis, Dr. Yaşar Durance Children with Visual Impairment	Dr. Iva Kumpar Plese oğlu Dr. Nikolas Kozeis
16.45 - 17.15	SATELLITE SYMPOSIUM ALCON Moderator: Dr. Ariana Kelmendi  Different IOL solutions for Presbyopia connections  Argos CAS - more than optical biometer  Pediatric Ophthalmology and Strabismus Moderators: Dr. Huban Atillla, Dr. Nikolas Kozeis, Dr. Yaşar Durancı Children with Visual Impairment  Electrophysiology for Children with Visual Impairment	Dr. Iva Kumpar Plese  oğlu  Dr. Nikolas Kozeis  Dr. Ayşe Öner
16.45 - 17.15	SATELLITE SYMPOSIUM ALCON Moderator: Dr. Ariana Kelmendi  Different IOL solutions for Presbyopia connections  Argos CAS - more than optical biometer  Pediatric Ophthalmology and Strabismus Moderators: Dr. Huban Atillla, Dr. Nikolas Kozeis, Dr. Yaşar Duranc  Children with Visual Impairment  Electrophysiology for Children with Visual Impairment  Leucocoria and Differential Diagnosis	Dr. Iva Kumpar Plese  Dr. Nikolas Kozeis  Dr. Ayşe Öner  Dr. Şengül Özdek
16.45 - 17.15	SATELLITE SYMPOSIUM ALCON Moderator: Dr. Ariana Kelmendi  Different IOL solutions for Presbyopia connections  Argos CAS - more than optical biometer  Pediatric Ophthalmology and Strabismus Moderators: Dr. Huban Atillla, Dr. Nikolas Kozeis, Dr. Yaşar Durance Children with Visual Impairment  Electrophysiology for Children with Visual Impairment  Leucocoria and Differential Diagnosis  Visual Complications of ROP	Dr. Iva Kumpar Plese  Dr. Nikolas Kozeis  Dr. Ayşe Öner  Dr. Şengül Özdek  Dr. Tuba Atalay

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4 KAO
National Congress

**25 - 26 October, 2024** Hotel Emerald, **Pristina, Kosovo** 



## **Scientific Program**

26 October 2024, Saturday

### HALL B

08.30 – 10.00	FREE PAPERS – II Moderators: Dr. Sibel Kadayıfcılar, Dr. Vigan Roka	
OP-26	Examination of Retinal and Optic Disc Structures in Patients with Bipolar Disorder	Birumut Gedik
OP-27	Evaluation of Choroidal Vascularity Index, Retinal and Optic Nerve Changes in Erectile Dysfunction	Pelin Kıyat
OP-28	Comparison of Structural And Vascular Characteristics of The Macula In Dominant And Non-Dominant Eyes	Abdullah Erdem
OP-29	Evaluation of Choroidal Thickness and Choroidal Vascular Index by Optical Coherence Tomography in Patients With Morbid Obesity and Comparison with Healthy Controls	Burcu Işık
OP-31	Comparison of Choroidal and Retinal Microvascular Changes During Pregnancy and Postpartum Period With Optical Coherence Tomography Angiography	Berkay Öner Karaca
OP-32	Deep Learning Assisted Analysis of OCT Biomarker Changes in Recalcitrant Neovascular Age Related Macular Degeneration after Switch to Faricimab.	Ben Asani
OP-33	Anti VEGF Revolution, Progress and Challenges -Our Experience	Belinda Pustina
OP-34	Subretinal Injection to Treat Submacular Hemorrhage Secondary To Age-Related Macular Degeneration and Case Series	Vigan Roka
OP-35	Intravitreal Dexemetasone Implant for the Treatment of Diabetic Macular Edema in Eyes with Intraocular Silicone Tamponade	Büşra Kaya Adaş
OP-36	Clinical Features of Children with Optic Disc Swelling	Pınar Bingöl Kızıltunç
OP-37	Assesment of the Effects of Two Commonly Used Mydriatics on the Macular and Peripapillary Microvascular Systems of Healthy Children: An Optical Coherence Tomography Angiography Study	Yara Chiekhismailzadeh

# 2nd Balkan Ophthalmology Meeting

in conjunction with

4 KAO
National Congress

25 - 26 October, 2024 Hotel Emerald, **Pristina, Kosovo** 



OP-62	When Uveitis Isn't What It Seems: A Year of Diagnostic Challengeswith Neoplastic Masquerade Syndormes	Dr. Murat Oklar
10.00 – 11.30	FREE PAPERS – III Moderators: Dr. Tülay Şimşek, Dr. Orhan Kubati	
OP-38	Comparison of Macular Ganglion Cell-Inner Plexiform Layer Thickness and Sectoral Ratio Asymmetry with Different Glaucoma Types and Early Detection of Early Glaucomatous Defects in Healthy Eyes	Merve Çetin
OP-39	Evaluation of Optic Nerve Head Morphology of Small Optic Discs in Healthy eyes Using Different Optical Coherence Tomography Parameters	Kübra Çağlar
OP-40	Lamina Cribrosa Thickness and Ocular Biometric Parameters Affecting Lamina Cribrosa Thickness in Different Glaucoma Stages	Hilal Toprak Tellioğlu
OP-41	Trabeculectomy as the Gold Standard in the Surgical Treatment of Glaucoma	Muhamedin Rushiti
OP-42	Evaluation of Long-Term Results of Transscleral Diode Laser Cyclophotocoagulation in End-Stage Glaucoma Cases with Poor Visual Potential	Arta Shukriu
OP-43	Cyclocyotherapy as Emergency Therapeutic Response in to the Patient With NV Glaucoma Caused By CRVO-Case Report	Irina Bogdanova
OP-44	Duane Syndrome Treatment	Mentor Ilazi
OP-45	Evaluation of the Validity and Reliability of the Turkish Version of the Adult Strabismus Quality of Life Questionnaire (AS-20)	Eylem Gökalp
OP-46	V Patern Horizontal Strabismus with Inferior Oblique Overaction	Mirlinda Kubati
OP-47	Sensorial Exotropia	Alkeda Tandili
OP-48	Optical Filters Preferences in Low Vision Rehabilitation	Esra Şahlı
OP-49	Congenital Palsy of Trochlear Nerve in Our Practice and Some Dilemmas in Treatment	Orhan Kubati
13.30 - 15.00	FREE PAPERS – IV Moderators: Dr. Yaşar Duranoğlu, Dr. Gazmend Kacaniku	
OP-51	The Effect of Selective Suture Removal on Post-Penetrating Keratoplasty Astigmatism in Keratoconus Patients	Zeynep Soysaraç Nergizal
OP-52	Conjunctival Neoplasia	Yllke Salihu

# 2<sup>nd</sup> Balkan Ophthalmology Meeting

in conjunction with

4 KAO
National Congress

25 - 26 October, 2024

Hotel Emerald, Pristina, Kosovo



OP-53	Tear Film Stability and Blink Behavior Interact with Each Other	Yakup Acet
OP-54	Evaluation of Vogt Palisades and Conjunctiva Epithelia With Optical Coherence Tomography (OCT) and In-Vivo Confocal Microscopy (IVCM) in The Postoperative Period in Patients Who Have Had Pterygium Surgery	Damla Nur Dinç
OP-55	Tectonic and Therapeutic Penetrating Keratoplasty: Causes, Outcomes and Complications	Gizem Taşkın
OP-56	Cross-Linking Results According to Age in Pediatric Patients Undergoing Cross-Linking for Keratoconus	Sibel Zirtiloğlu
OP-57	Choroidal Changes in Keratoconus and Effects of Corneal Collagen Crosslinking Treatment	Miray Karataş
OP-58	Prognosis of Infectious Corneal Ulcers Treated with Antibiotics Empirically Without Culture Results	Sevim Kuyumcu
OP-59	Evaluation of Glaucoma Outcomes After Penetrating and Lamellar Keratoplasty	Merve Ersoy
OP-60	Analysis of Corneal Mapping and Ocular Surface Parameters with Anterior Segment Optical Coherence Tomography in Newly Diagnosed Severe Obstructive Sleep Apnea Syndrome Patients	Halil İbrahim Sönmezoğlu
OP-61	Importance of Clinical and AS-OCT Features of Descemet Membrane Detachment After Cataract Surgery	Diba Bulluti



## **FREE PAPERS**

25 October 2024 11.00-12.15

**Young Ophthalmologist Free Paper Session** 

# 2nd Balkan Ophthalmology Meeting in conjunction with 4th KAO National Congress

25 - 26 October, 2024 Hotel Emerald, **Pristina, Kosovo** 



**OP-01** 

## Suprachoroidal implantation of corticosteroid slow release implants for the treatment of cystoid macular edema

Ben Asani<sup>1</sup>, Jakob Siedlecki<sup>1</sup>, Johannes Schiefelbein<sup>1</sup>, Siegfried G Priglinger<sup>1</sup>,

(1) Department of Ophthalmology, Ludwig-Maximilians-University, Munich, Germany

**Purpose:** In case of an instable iris-lens diaphragm, intravitreal corticosteroid slow-release implants (CSRI) may occidentally migrate into the anterior chamber, leading to damage of the corneal endothelium with consecutive corneal edema. A suprachoroidal application of these implants might overcome this problem. The purpose of this interventional case series was to test the efficacy and safety of a suprachoroidal application of dexamethasone (Ozurdex®) and fluocinolon acetonide (Illuvien®) intravitreal implants for the treatment of chronic cystoid macular edema (CME).

**Methods:** In this single-center, off-label proof of principle study, dexamethasone and fluocinolon acetonide implants were administered into the suprachoroidal space in patients with CME and instability of the iris-lens diaphragm (e.g. aphakia, scleral or iris fixated IOL, large iridectomy). The suprachoroidal implant was placed at the level of the pars plana at the transition to the retina. Surgical time, treatment responses of the CME on OCT, incidence of secondary intraocular pressure increases, visual acuity and surgery related complications were evaluated.

**Results:** In total, 16 patients were treated (14 dexamethasone and 2 fluocinolon acetonide). Mean age was  $72.25 \pm 17$  years and mean follow up was  $1.8 \pm 0.97$  months. The procedure was well tolerated with no severe intraoperative or postoperative side effects. Mean central retinal thickness (CRT) decreased significantly from 563.13 to 382.12 (p=0.002). There was no statistically significant difference between mean preoperative (16.38 mmHg) and postoperative (14.13 mmHg, p=0.15) intraocular pressure and no incidence of steroid induced glaucoma. Mean best corrected visual acuity (BCVA) significantly improved from 1.07 logMAR to 0.65 logMAR (p=0.01).

**Conclusions.** Suprachoroidal implantation of corticosteroid slow-release implants proves to be a safe and feasible alternative for complex eyes with CME and a disruption of the anterior- posterior segment border.

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4 KAO
National Congress

25 - 26 October, 2024 Hotel Emerald, **Pristina, Kosovo** 



**OP-02** 

### **Crystalline Keratopathy**

Yilke Salihu\*

\* Eye Clinic, University of Würzburg, Germany

Crystalline keratopathy is an uncommon corneal disorder marked by the deposition of needle- like, refractile crystalline material within the corneal stroma. It can result from a variety of etiologies, including infectious agents such as *Streptococcus viridans*, *Candida albicans*, and atypical *Mycobacterium*, as well as non-infectious causes like paraproteinemias (e.g., monoclonal gammopathy of undetermined significance, multiple myeloma), hyperlipidemia, or chronic use of topical corticosteroids. Clinically, patients may present with decreased visual acuity, photophobia, and the characteristic appearance of corneal crystals, detectable through slit- lamp biomicroscopy.

The diagnosis is based on clinical examination, supplemented by microbiological analysis for infectious causes and laboratory tests such as serum protein electrophoresis to detect underlying systemic conditions. Treatment varies depending on the cause: infectious crystalline keratopathy requires targeted antimicrobial or antifungal therapy, whereas non-infectious cases may be managed by addressing the systemic condition. In severe or refractory cases, corneal transplantation may be indicated to restore vision and prevent complications.

Due to the heterogeneous nature of crystalline keratopathy, early diagnosis and a multidisciplinary approach are critical for effective management and to prevent vision- threatening outcomes.

**Keywords:** crystalline keratopathy, corneal crystals, infectious keratopathy, paraproteinemia, multiple myeloma, hyperlipidemia, corneal transplantation.





25 - 26 October, 2024

Hotel Emerald, Pristina, Kosovo

### **OP-03**

## Is a Suitable and Economical Approach Possible for In-vitro Studies of Corneal Epithelium?

Ayse Bozkurt Oflaz<sup>1</sup>, Ali Torabi<sup>2</sup>, Ebru MARZİOĞLU ÖZDEMİR<sup>2</sup>, Banu Bozkurt<sup>1</sup>

<sup>1</sup>Department of Ophthalmology, Selçuk University, Konya, Türkiye

<sup>2</sup>Department of Genetics, Selçuk University, Konya, Türkiye

**BACKGROUND AND AIM**: Picrosirius Red (PSR) stain is commonly used in daily practice for the visualization and quantification of collagen fibers. This study aims to present an in-vitro study on Human Corneal Epithelial Cells (HCECs) using PSR stain.

**METHODS:** HCEC cells were thawed and prepared in DMEM F12 medium and cultured in Complete Keratinocyte Medium (CKM). The cells were re-cultured at 70-80% confluency to form a monolayer. An abrasion model was created, and the cells were divided into groups treated with valproic acid, Thealoz Duo, and a control group. The scratch test was photographed at 0, 6, 12, and 24 hours. PSR staining was performed and analyzed using ImageJ software.

**RESULTS:** The migration test showed that valproic acid and Thealoz Duo treatments produced better results compared to the positive control group. Thealoz Duo treatment demonstrated the best performance in terms of cell morphology and collagen accumulation.

**CONCLUSIONS:** PSR can be used more economically and practically for collagen staining compared to Masson's Trichrome or Sirius Red stains. In corneal studies, the use of PSR stands out for its cost-effectiveness and ease of application. PSR stain holds great potential for in vitro research on the cornea.

**Keywords:** Corneal Epithelial Cells, Picrosirius Red, In-vitro Study, Collagen Staining, Abrasion Model.

**25 - 26 October, 2024** Hotel Emerald, **Pristina, Kosovo** 

### **OP-04**

### Long-term clinical and visual outcomes in ocular rosacea

Gülce Kayıkçı, Metehan Şimşek, Gülay Yalçınkaya Çakır, Sibel Ahmet, Seda Liman Uzun SBU, Beyoğlu Göz Eğitim ve Araştırma Hastanesi, İstanbul

**BACKGROUND AND AIM:** To evaluate the long-term clinical and visual outcomes in ocular rosacea cases and the factors affecting the outcomes.

**METHODS:** The files of patients with ocular rosacea between January 2010 and March 2022 were retrospectively analyzed. Demographic data, best corrected visual acuity (BCVA), biomicroscopic findings, follow-up time, topical cyclosporine use, complications at presentation and during follow-up were recorded.

**RESULTS:** 48 patients (36 females, 12 males) with 84 eyes were included. The mean age was  $23.37\pm16.4$  years. The mean follow-up period was  $30.93\pm22.7$  (12-108) months. 54 (64.3%) patients were treated with topical cyclosporine. The mean duration of topical cyclosporine use was  $22.68\pm17.4$ (6-60) months. BCVA was  $0.71\pm0.8$  at presentation and  $0.75\pm0.3$  at the last follow-up (p=0.01). While unilateral involvement was present in 33 (68%) patients at initial presentation, unilateral involvement was present in 12 (25%) patients at the last follow-up, bilateral involvement increased (p<0.001). While 67 (84%) eyes had punctate epitheliopathy (PE), 36 (42%) corneal nephelion, 45 (59%) limbal vascularization (LV) at initial presentation, 27 (32.1%) eyes had PE, 56 (66.7%) eyes had nephelion, 50 (59%) eyes had LV at last follow-up (p<0.001, p<0.001, p=0.18 respectively). The mean number of LV quadrants was  $6.34\pm4.3$  at the last follow-up visit. There was no correlation between LV density and final BCVA (p=0.11). Thirty patients (35%) had a history of keratitis at least once during follow-up. Outcome BCVA was similar in cases with and without keratitis (p=0.86).

**CONCLUSIONS:** It has been observed that PE regresses with regular follow-up and appropriate treatment in ocular rosacea; however, nephelion may develop in the long term. The fact that LV was present in more than half of the cases at the time of diagnosis and didn't increase during follow-up indicates that the disease can be kept under control. The fact that bilateral involvement increases over time shows the importance of careful examination of the initially uninvolved eye during follow-up.

**Keywords:** Limbal vascularization, ocular rosacea, punctate epitheliopathy

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4 KAO
National Congress

**25 - 26 October, 2024** Hotel Emerald, **Pristina, Kosovo** 



### **OP-05**

## How Does the Presence of Pterygium Affect the Ocular Surface and Dry Eye Symptoms in Patients with Dry Eye Disease?

Bilge Tarım

Department of Ophthalmology, Beypazarı State Hospital, Ankara, Turkey

**BACKGROUND AND AIM**: The aim of this study is to investigate the effects of the presence of pterygium on the ocular surface and dry eye symptoms in patients with dry eye disease.

**METHODS:** This retrospective study included 250 patients with dry eye disease who presented to the ophthalmology clinic. The age and gender of all patients were recorded; a full ophthalmologic examination was performed. The best-corrected visual acuities (BCVA) were noted in logMar. All patients were evaluated for Schirmer test, tear breakup time (TBUT), ocular surface disease index (OSDI) score, and corneal staining degree. Patients without pterygium (140 patients) were classified as Group 1, and those with pterygium (110 patients) as Group 2. The groups were compared with each other.

**RESULTS:** The mean age of Group 1 was  $32.19\pm5.42$ , and that of Group 2 was  $33.49\pm4.43$  (p=0.037). Both groups were similar in terms of gender (p=0.298). The BCVA of the groups were similar (p=0.847). No significant difference was observed between the groups in terms of the Schirmer test (Group 1:  $10.15\pm2.40$ ; Group 2:  $9.73\pm4.77$ ; p=0.397). TBUT was  $7.25\pm1.82$  in Group 1 and  $5.36\pm2.85$  in Group 2, and was significantly lower in Group 2 (p<0.001). The OSDI score was  $30.20\pm23.13$  in Group 1 and  $49.80\pm31.18$  in Group 2, and was significantly higher in Group 2 (p<0.001). The degree of corneal staining was found to be significantly higher in Group 2 (p<0.001). In the correlation analysis; a negative correlation was found between pterygium and TBUT (r: -0.374, p<0.001), and a positive correlation was found between pterygium and OSDI score (r: 0.341, p<0.001), and between pterygium and corneal staining degree (rho: 0.524, p<0.001).

**CONCLUSIONS:** Pterygium is a common ocular surface disease characterized by the growth of conjunctival tissue over the cornea. In this study, patients with pterygium had lower TBUT, higher OSDI scores, and higher corneal staining degrees. These findings indicate that pterygium negatively affects dry eye disease symptoms and the ocular surface.

**Keywords:** Dry Eye Disease, Ocular Surface, OSDI score, Pterygium, Schirmer Test, Tear Breakup Time

## <sup>nd</sup> Balkan **Ophthalmology Meeting**

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**OP-06** 

Central Retinal Vein Occlusion (CRVO) accompanied by cilioretinal artery occlusion (CLRAO) in a young patient, following COVID-19 infection and Anti-COVID vaccination.

Dr. Endrit Sheremeti, Dr. Burim Zhuri, Dr. Egzona Kollqaku Agusholli, Dr. Mirlinda Kubati Ajeti, Dr. Dardan Sheremeti

**Introduction**: Central retinal vein occlusion is a retinal vascular disease that, in some rare cases, is associated with cilioretinal artery occlusion, leading to sudden loss of vision in that eye. The pathophysiology of the disease is quite complex and involves various mechanisms of hemodynamics and retinal vascular perfusion. Common risk factors include: advanced age, arterial hypertension, hyperlipidemia, diabetes mellitus, oral contraceptives, thrombophilias, etc. According to the medical data reviewed, this disease has also appeared in some young individuals with no systemic disease history, following COVID-19 infection and vaccination, as illustrated in the case presented in this paper.

**Objective**: To describe the clinical presentation, risk factors, pathophysiology, diagnostic methods, and treatment course of a clinical case involving a young patient with central retinal vein occlusion accompanied by cilioretinal artery occlusion, following COVID-19 infection and vaccination.

**Methodology**: The method of this work is a case presentation. We selected a clinical case from our practice and described and illustrated the management of the case, including the history, fundoscopic examination, imaging diagnostic methods (OCT and FFA), laboratory analyses, treatment, and monitoring of the disease course.

**Conclusion**: COVID-19 infection and the anti-COVID vaccine were the only identified risk factors in the studied case. With the advent of the COVID-19 pandemic, an increase in the incidence of vascular diseases across all organ systems, including the eye, has been reported. According to the medical data reviewed, similar cases of retinal vascular diseases following COVID-19 infection or anti-COVID vaccination have also been reported in other international medical centers, as discussed in their publications. Central retinal vein occlusion with cilioretinal artery occlusion represents a retinal vascular disease that constitutes a clinical emergency, where early diagnosis and adequate management are essential for preserving vision and minimizing associated complications. In cases where we have partial CRVO, the non-ischemic form, and when the cilioretinal artery occlusion is incomplete and does not directly involve the macular region, the prognosis is good with visual recovery >0.5 in 70% of cases.

**Keywords**: CRVO, cilioretinal artery, vascular disease, COVID-19

# 2 nd Balkan Ophthalmology Meeting in conjunction with 4th KAO National Congress 25 - 26 October, 2024

**OP-07** 

### **Our First Experience in Treatment of Macular Hole**

Ardian Shabani

Hotel Emerald, Pristina, Kosovo

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**OP-08** 

## Clinical Features and Outcomes of Pars Plana Vitrectomy for Retained Lens Fragments after Phacoemulsification

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**BACKGROUND AND AIM:** To describe the clinical features and outcomes of dropped nucleus during phacoemulsification (PE) surgery.

**METHODS:** Thirty-two eyes of 32 patients whose lens fragments dropped into the vitreous during PE surgery between November 2021 and August 2024 were included in the study. Age, gender, preoperative and postoperative best corrected visual acuity (BCVA), experience of the surgeon who performed the primary surgery, drop material, need for pars plana vitrectomy (PPV), time to PPV, technique used in PPV, intraocular lens (IOL) implantation and complications were evaluated.

**RESULTS:** The mean age of the patients was 67.91±7.6 years (56-75), 43.8% were female and 56.2% were male. 15.6% of the cases were performed by surgeons with more than 5 years of experience, 40.6% by surgeons with 1-5 years of experience, and 43.8% by surgeons with less than 1 year of experience. 8 (25%) patients had hard nuclear cataract, 5 (15.6%) patients had pseudoexfoliation (PEX), 3 (9.4%) patients had zonular weakness, and 3 (9.4%) patients had trauma. Total lens was dropped in 25% of the patients, nucleus in 62.5%, and epinucleus fragments in 12.5%. PPV was performed on avarage 7.5 days after the primary surgery. In PPV, the drop material was aspirated with a vitrector in 62.5% and in 37.5% patients, the lens material was removed to the anterior chamber with perfluorocarbon and aspirated with a PE handpiece. Regmatogenous retinal detachment developed in 1 patient in the postoperative period. IOL was implanted in 28.1% of the patients during the primary surgery, in 34.3% during PPV, and in 37.5% later. The mean BCVA was 0.1± 0.1 before surgery and 0.4± 0.1 at the last follow-up visit.

**CONCLUSIONS:** Lens fragments drop during PE surgery is more common in surgeons with less than 5 years of experience and in patients with hard nuclear cataracts, PEX, and zonular weakness. Visual prognosis is good with early PPV in these cases.

**Keywords:** dropped nucleus, pars plana vitrectomy, phacoemulsification



### **Refractive Surgery: A New Perspective on Vision Correction**

Kreshnik Pollozhani

## 2nd Balkan Ophthalmology Meeting

4th KAO
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**25 - 26 October, 2024** Hotel Emerald, **Pristina, Kosovo** 



**OP-10** 

## Could intraoperative floppy iris syndrome (IFIS) be predicted by pupillometry?

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**BACKGROUND AND AIM:** To investigate the relationship between preoperative pupillometry analysis and the occurrence of IFIS in patients with benign prostatic hyperplasia (BPH) taking alpha-adrenergic antagonists (ARA).

**METHODS:** This cross sectional study involved 36 eyes of 36 male patients (mean  $69.52 \pm 7.25$  years) that underwent cataract surgery. Static and dynamic measurements were obtained with automatic pupillometry of Sirius corneal topography device (CSO, Firenze, Italy) before a detailed preoperative examination. The mean pupil diameter (PD) for scotopic (0.4 lux), mesopic (4.0 lux), photopic conditions (40 lux) were analyzed for static pupillometry. Regarding dynamic measurements, the mean pupil dilation speed at the 10th second was calculated. Furthermore, it was noted whether IFIS occurred during the operation and, its grade was documented.

**RESULTS:** IFIS was observed in 20 of 36 eyes (55.6%), and intraoperative complications were recorded as 6 minor iris trauma and 1 posterior capsule tear in IFIS group. According to IFIS grading, 11 eyes were classified as Grade 1, 8 eyes were in Grade 2, and 1 eye was in Grade 3. Scotopic PD, mesopic pupil PD, and pupil dilatation speed were significantly lower in IFIS group compared to non IFIS group (4.42  $\pm$  0.69 mm vs 5.10  $\pm$  0.72 mm, 3.94  $\pm$  0.55 mm vs 4.62  $\pm$  0.56 mm, 0.14  $\pm$  0.05 mm/s vs 0.27  $\pm$  0.07 mm/s; p<0.001, respectively). No significant difference was reached in photopic PD among the groups (3.43  $\pm$  0.51 vs 3.78  $\pm$  0.62 mm; p>0.05). In the ROC analysis, scotopic PD of less than 5 mm, mesopic PD of less than 4.1 mm, and pupil dilation speed of less than 0.2 mm/s have been found to statistically significant increase the risk of developing IFIS (p<0.05).

**CONCLUSIONS**: Despite the small sample size, our findings revealed that pupillometric measurements may be useful in predicting IFIS in patients treated with ARA for BPH.

**Keywords:** Dynamic pupillometry, IFIS, pupil dilation speed, static pupillometry

### NAION and Pseudo Foster Kennedy Syndrome- Case Report

Dr. Fahrudin Ilazi

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### **CASE REPORT**

A 59-year-old man is admitted to our clinic due to the sudden painless loss of vision in his right eye. At presentation, his best-corrected visual acuity was 0.2 s.c for the right eye and hand movement for the left eye. The intraocular pressure by applanation tonometry was 14 mmHg in the right eye and 10 mmHg in the left eye. In the Ishihara test, the patient could distinguish colors. From the anamnesis of life, the patient had chronic hypertension and diabetes mellitus. Also, the patient claimed that 10 years ago he had lost the sight in his left eye after the same symptoms. The findings on external examination and slit-lamp examination of the anterior segment were within normal limits. The fundus of each eye was examined after pharmaceutical mydriasis with tropicamide and phenylephrine hydrochloride ophthalmic solutions. The optic nerve disc in the right eye was imprecisely delimited, had a swollen appearance and the cupping was absent, this aspect being highly suggestive for papillary edema. The macula appeared within normal limits. The ophthalmoscopy examination of the left eye showed optic atrophy. The performed perimetry showed defects in most of the visual field of the right eye, including absolute scotoma in the peripheral part, while in the left eye absolute scotoma almost in the entire visual field. Optical coherence tomography showed normal macular thickness in both eyes. Fluorescein angiography (FA) showed delayed filling of blood vessels in both eyes, as well as leakage in the right eye. The patient was further investigated in order to establish the etiological diagnosis and the course of treatment. The complete blood count and erythrocyte sedimentation rate had normal values, there were no significant findings at the neurological exam, which included a cerebral MRI, and the endocrinological examination was within normal limits. Considering these complementary investigations, we established the diagnosis of Pseudo-Foster Kennedy syndrome, as a consequence of NA-AION. The patient was treated for several weeks with corticosteroids and aspirin, but the treatment was not successful.

**Keywords:** Non-Arteritic Anterior Ischemic Optic Neuropathy (NA-AION), Pseudo-Foster Kennedy syndrome (PFKS), optic disc edema, optic nerve atrophy.



### Papiledema in Idiopathic Intracranial Hypertension

Dr. Dardan Shermeti

**National Congress** 

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### **OP-13**

### The Importance of Topography for Medical Board Examination and Detection of Corneal Refractive Surgery

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**BACKGROUND AND AIM:** Corneal refractive surgery is often difficult to detect by examination and is a cause for disqualification of military students. It was aimed to evaluate the topographic findings of corneal refractive surgery and to reveal the refractive surgery detection rate in health board examination.

**METHODS:** The military students who applied to the health board in July 2024 and were eliminated due to corneal refractive surgery were included to the study retrospectively. The rate of eliminated students in the total number of applications was evaluated. The students' age, gender, central corneal thickness (CCT), K1 and K2 values were examined.

**RESULTS:** In a total of 1516 military student examinations, 35 (33M, 2F) students were eliminated due to corneal refractive surgery. Those are the ones detected by topography incidentally. The elimination rate was found to be 2.3%. Median age was 19 (min: 18, max: 20). Mean CCT value was 505.8 µm (min: 476, max: 543). Mean K1 value was 39.98 (min: 38.0, max: 42.8) and K2 value was 41.04 (min: 38.7, max: 44.8).

**CONCLUSIONS:** It was observed that the elimination rate due to corneal refractive surgery was low in military student examinations and it is thought to be more than that. It should be noted that biomicroscopy examination findings may not be present in these patients or may be easily overlooked. Therefore, keratometric values should be carefully examined in military student health board exams. It was concluded that topography has an important place in the detection of corneal refractive surgery and can be used as a routine in military student examinations.

**Keywords:** Corneal Refractive Surgery, Medical Board, Military School, Topography



## **FREE PAPERS -I**

25 October 2024 13.30-15.00



Hotel Emerald, Pristina, Kosovo

## Our Experience in Multifocal Implantation After Cataract Surgery and Clear Lens Extraction

Burim Zhuri, Endrit Sheremeti, Shend Ajeti, Dardan Sheremeti

**Introduction:** Intraocular lens (IOL) implantation serves both refractive and cataract surgery. Multifocal intraocular lenses (MFIOLs) contain multiple refractive zones that create more than one focal point (focus) and therefore enable near and far vision. The main side effects experienced by patients are visual phenomena in the form of halos, glares and starbursts. These occur due to the scattering of light that occurs naturally during the transition between the near and far areas of the lens.

**Study purpose:** Adequate selection of patients who will undergo MFIOL implantation. To compare the visual acuity for far, medium and near distance in patients, after implantation of multifocal lenses. To determine the level of patient expectation satisfaction with MFIOLs.

**Material and methods:** This paper is a retrospective cohort study. We collected the data of patients who underwent surgical intervention for refractory and cataract during the period November 2020 - July 2024 at Q.L.S. "Kubati". Before the intervention, the dioptry was determined with an autokeratore-fractometer, the corneal topography was performed with Pentacam, the tear quantity was determined, and the anterior and posterior segments were examined.

**Results:** MFIOL implantation was performed in a total of 35 patients (68 eyes). The ratio between men and women was 15: 20. Most (25) patients were operated for refractory purposes, while in 10 patients MFIOLs were implanted due to cataract. The average visual acuity expressed in decimal form was 0.8-0.9 sc. Precizon Presbyopic NVA lenses were implanted in the largest number of cases (25).

**Conclusion:** In almost all cases, visual acuity for far, medium distance and near distance, after surgical intervention, has been very good. Fully informing patients and motivating them to overcome the adaptive period, neurosensory adaptation, ensures a high level of satisfaction.

**Keywords:** Multifocal lenses, Refractive surgery, Cataract surgery, Pentacam.

## 2nd Balkan Ophthalmology Meeting in conjunction with

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**OP-15** 

### Phakic lenses (ICL/IPCL) in the correction of various refraction defect

Stela Ceca, MD, Minir Asani, MD

**Purpose:** To evaluate the results and possible complications of ICL/IPCL lens implantation in patients with various refractive defects in a follow-up of at least 5 years.

**Method:** In 10 years, 61 ICL/IPCL lenses were implanted at the German Eye Clinic in Tirana, 10 of which were in patients with stabilized keratoconus, 5 eyes after keratoplasty, 6 eyes with hyperopia and astigmatism and 30 eyes with high myopia. Before undergoing surgical intervention, the patients underwent a detailed ophthalmological examination: uncorrected and corrected vision (BCVA) in miosis and cycloplegia, Autorefractometer/Keratometer (Huvitz HRK- 9000°), Corneal Topography and Vault measurement with Scheimpflug (Allegro Oculyzer WaveLight), Biometry, (Allegro Biograph), Pupilometry, Microscopia Speculare (Tomey EM-3000), Fundoscopy and OCT of NO and macula (OCT Optovue/Angiovue). Patients who met all the criteria were subjected to the intervention for the implantation of phakic lenses. IPCL V2.0 TORIC (Care Group) was implanted in patients with high astigmatism, while ICL (Staar Surgical) was implanted in patients with high myopia. Patients were checked with SL, Goldman tonometer and ICL Vault measurement with Scheimpflug Tomography on day 1, 3 and after 1, 3 and 12 months.

**Results:** Visual acuity was at least 2 lines higher than BCVA before surgery in all patients and remained unchanged during the entire follow-up. In 10 eyes, TIO > 20 mmHg in the first week of surgery was managed with local hypotonizer for a maximum of 2 weeks. Lenses were changed in 2 eyes due to Vault < 300 micron. No patient had retinal complications. One patient had a dislocation of the ICL 3 months after the intervention as a result of a blow to the eye, and the lens was repositioned without any complications after 2 days. The glare of the lights was complained of only in the first post-operative period.

**Conclusion:** ICL or IPCL phakic lenses are very efficient in the treatment of high refractive errors or in cases where corneal laser treatment is contraindicated. They have long-term safety and stability, manageable complications and reversibility.



Clinical Outcomes of a New Monofocal Intraocular Lens in Patents Undergoing Phakovitrectomy for Idiopathic Epiretinal Membrane

Gentian Bajraktari



## A modification of the intraocular lens blocking technique without posterior capsulorhexis for intraocular foreign body removal

Sevim Ayça Seyyar, Oğuzhan Saygılı, Kıvanç Güngör

Gaziantep Üniversitesi Tıp Fakültesi Hastanesi Göz Hastalıkları Ana Bilim Dalı

**BACKGROUND AND AIM:** The intraocular lens (IOL) blocking technique described for the removal of intraocular foreign bodies (IOFB) emerged as a result of an effort to prevent the foreign body from being retracted into the posterior segment due to the resistance encountered while removing it from the corneal incision. However, in the technique described, in addition to the difficulty of the surgical procedure, the new concern is to create a posterior capsulorhexis according to the size of the foreign body and to pass the foreign body through the capsulorhexis.

**METHODS:** Here we describe a new approach to the IOL blocking technique. In this approach, the IOFB, which is held with intraocular forceps without any opening in the posterior capsule, is held in a perpendicular position to the long axis, lifted directly into the anterior chamber, and safely removed from the front of the monoblock foldable IOL.

**RESULTS:** In all patients treated with this approach, IOFBs were successfully removed without intraoperative or postoperative complications, and postoperative IOL centralization was achieved in all patients.

**CONCLUSIONS:** The removal of IOFBs is a rather complicated procedure. Several challenges have been overcome with new techniques recently described for surgeons who will opt for the corneal incision route. Our experience shows that the approach described herein, which reduces surgical manipulation in the intraocular lens blocking technique, does not impair postoperative IOL centralization and does not cause any complications during or after surgery.

**Keywords:** intraocular foreign bodies, intraocular lens blocking technique, posterior capsulorhexis, intraocular lens centralization



# Macular Hole Surgery Without Postoperative Head Positioning: A Technique of Viscoelastic Device Injection Covering the Temporal Internal Limiting Membrane Flap

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**BACKGROUND AND AIM:** Kelly and Wendel's 1991 study revealed that full-thickness macular holes (MH), once considered untreatable, could be managed with pars plana vitrectomy (PPV) and liquid gas exchange. The addition of internal limiting membrane (ILM) peeling and various staining agents in MH surgery has greatly enhanced success rates. Michalewska et al. developed the inverted ILM flap technique for primary surgical repair of large MH in 2010. The main issue affecting various ILM flap techniques is the stabilization of the created ILM flaps on the fovea while the patient is still on the operating table, that is in the very early postoperative period. Here, we describe an additional step that we believe is important to achieve maximum flap stabilization in the early postoperative period in MH surgery performed with the temporal inverted ILM flap technique.

**METHODS:** A temporal ILM flap was created in the patients. The created ILM flap was inverted over the MH using perfluorocarbon (PCFL) injection. Then, after a fluid-air exchange, careful PFCL-air exchange was performed. Under air, two- to three-disc diameters of viscoelastic device were injected over and around the inverted flap. Finally, the air-sulphurhexafluoride exchange was performed, and the sclerotomies are closed. No postoperative head position was recommended to any patient.

**RESULTS:** In all 16 eyes treated with this approach, the MH was closed with a single procedure, and there were no intraoperative or postoperative complications.

**CONCLUSIONS:** Displacement of the ILM flap during or after fluid-air exchange when repairing MHs causes surgical failure and is therefore a problem that needs to be resolved. Our clinical experience suggests that the application of a viscoelastic device over the flap during inverted ILM flap surgery can achieve a high rate of surgical success without requiring patients to maintain any, possibly inconvenient, head position. We hope that larger investigations will confirm our initial encouraging findings.

**Keywords:** Inverted internal limiting membrane flap technique, macular hole, viscoelastic device, vitrectomy



25 - 26 October, 2024

Hotel Emerald, Pristina, Kosovo

## Effect of Intravitreal Sulfur Hexafloride (SF6) Injection in The Management of Vitreomacular Traction

Oğuzhan Özçelik, Denizcan Özizmirliler, Eren Yağmurlu, Hamza Ekin, Ali Devebacak, Nilufer KOCAK Dokuz Eylül Üniversitesi, Göz Hastalıkları Ana Bilim Dalı, İzmir

**BACKGROUND AND AIM:** The aim was to evaluate the efficacy of intravitreal injection of sulfur hexafluoride (SF6) in the treatment of patients with vitreomacular traction (VMT).

**METHODS:** This retrospective study included patients with VMT confirmed by Optic Coherence Tomography (OCT). The study included a retrospective analysis of patients who received a single intravitreal injection of 0.3 mL of 100% SF6 and were followed up for a minimum of two months postoperatively. Full ophthalmic examination and OCT was performed at each visit. The primary outcome measure was VMT release and the secondary outcome measure was postoperative mean best corrected visual acuity (BCVA).

**RESULTS:** Eighteen eyes of 18 patients were included in the study. Fourteen (77.8%) of the patients were female and 4 (22.2%) were male. The mean age of the patients was 69.3 $\pm$ 7.2 (range: 57-81) years. The mean preoperative BCVA (LogMAR) was 0.71 $\pm$ 0.66 (range: 0.2-3.1). The mean central foveal thickness (CFT) was 398.33 $\pm$ 105.27 µm (range: 277-617 µm). VMT release occurred in 13 of 18 eyes (72.2%) by the last follow-up visit. The mean age and preoperative visual acuity were not found to be significantly different between successful and unsuccessful eyes. (p=0,64, p=0,31) Success was achieved in 71.4% of phakic eyes (10 of 14 eyes) and 75% of pseudophakic eyes (3 of 4 eyes). The mean CFT was 394.4 $\pm$ 99.3 µm and 408.6 $\pm$ 131.7 µm in successful and unsuccessful eyes, respectively. (p=0,83) The final BCVA of the successful eyes was significantly improved compared to the preoperative BCVA. (p<0.05) No complications were observed after intravitreal SF6 injection in any eye. Four of eyes failed eyes were operated on because of the progression of VMT and the development of a macular hole.

**CONCLUSIONS:** Intravitreal SF6 injection has been demonstrated to be a safe and effective treatment for VMT. Therefore, in patients with VMT, intravitreal SF6 injection may be considered as a first-line treatment in appropriate patients because it is both a minimally invasive and cost-effective method.

**Keywords:** intravitreal injection, sulfur hexafloride, vitreomacular traction

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**OP-20** 

### Temporal Inverted Internal Limiting Memrane Flap Technique versus Conventional Internal Limiting Membrane Peeling Technique for Large Macular Holes

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**BACKGROUND AND AIM:** To compare the functional, anatomical and morphological outcomes of the conventional internal limiting membrane (ILM) peeling technique and the temporal inverted internal limiting membrane flap technique in the treatment of full-thickness macular holes (FTMH) larger than 400 μm.

**METHODS:** A total of 32 eyes of 32 patients were included in the study. Conventional ILM peeling technique (Group 1) was performed in 16 patients and temporal inverted ILM flap technique (Group 2) was performed in 16 patients. Hole closure rate, closure pattern, best corrected visual acuity (BCVA), ellipsoid zone (EZ), and external limiting membrane (ELM) defects were analyzed at baseline and 6 months after surgery.

**RESULTS:** The mean minimum hole diameter was 514 μm in group 1 and 560 μm in group 2. The closure rates accomplished in Groups 1 and 2 were 75% and 100%, respectively. U-shaped closure was observed in 11 (68.75%) eyes in Group 1 and 14 (87.5%) eyes in Group 2. The mean BCVA (Snellen) changed from 0.093 to 0.310 in Group 1 and from 0.103 to 0.478 in Group 2 at 6 months. The post-operative BCVA were better with the temporal inverted ILM flap technique than with the conventional ILM peeling. Complete restoration of external limiting membrane was observed in 6 (37.5%) eyes in group 1 and 10 (62.5%) eyes in group 2. Complete restoration of ellipsoid zone was observed in 1 (6.25%) eye in group 1 and 3 (18.75%) eyes in group 2.

**CONCLUSIONS:** The results of the study suggest that the temporal inverted ILM flap technique for large macular holes has better FTMH closure rate, healing of the outer retinal layers, and therefore demonstrates better improvement in BCVA than conventional ILM peeling.

**Keywords:** Conventional internal limiting membrane peeling, macular hole, temporal inverted flap



### **Outcomes of Vitrectomy in Macular Hole Surgery**

İlir Osmanı

## Comparison of Clinical Outcomes of Three Different Suture Techniques in Upper Eyelid Blepharoplasty

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**BACKGROUND AND AIM:** The aim of this study is to compare edema, ecchymosis, and scar index in patients who underwent upper eyelid blepharoplasty using three different suture techniques: interrupted, continuous cutaneous, and continuous subcutaneous sutures.

**METHODS:** This prospective study included 158 eyelids from 79 patients who underwent bilateral upper eyelid blepharoplasty. Patients were divided into three groups based on the surgical method used (Group 1: Patients with interrupted sutures, Group 2: Patients with continuous cutaneous sutures, and Group 3: Patients with continuous subcutaneous sutures). The levels of edema and ecchymosis were evaluated on postoperative days 1, 7, and 30, and at 3 months. The Manchester Scar Scale was used to assess the scar index 30 days and 3 months after surgery. A 6-0 polypropylene suture material was used for all patients, and all surgeries were performed by the same surgeon.

**RESULTS:** There was no significant difference between the groups in terms of gender and average age. Group 1 included 60 eyelids, Group 2 included 52 eyelids, and Group 3 included 46 eyelids. When patients were evaluated postoperatively, it was observed that on the first day and the first week, patients in Group 1 and Group 3 had significantly less ecchymosis compared to Group 2 (p=0.034, p=0.013, respectively). No significant difference was found between Group 1 and Group 3 (p>0.05). The total scar index scores in Group 1 and Group 3 were significantly better at one month and three months compared to Group 2 (p=0.024, p=0.017, respectively).

**CONCLUSIONS:** According to the results of this study, the interrupted suture and continuous subcutaneous suture techniques after upper eyelid blepharoplasty are associated with less edema, less ecchymosis, and a lower likelihood of scarring compared to the continuous cutaneous suture technique. In patients undergoing upper eyelid blepharoplasty who have bleeding diathesis or wound healing issues, interrupted or continuous subcutaneous sutures might be considered

**Keywords:** Blepharoplasty, Suture techniques, Edema, Ecchymosis, Continuous sutur

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### **OP-23**

## **Evaluation of Botulinum Toxin A injection complications in cosmetic application**

Erol Dülger\*

\*VIP Health Clinic

**BACKGROUND AND AIM:** Boturlinum Toxin A is toxin that causes muscle paralisysis by blocking presynaptic release of neurotransmitters. It has widely used in treatment of disease like strabismus, blepharospasm and dystonia, spastisity, pain, salivary or sweating disorders, smooth muscle disorders etc. Recently its use in cosmetic field especially on face like glabella, crow's feet and forhead wrinkles incresed more than therapeutic use. Complications related with cosmetic application have also incresed. In this study, patients following botulinum toxin a application for cosmetic purpose were evaluated.

**METHODS:** Eleven patients with no any known history of chronic disease or medication who had botulinum toxin a injection for cosmetic application complications were enrolled in this study. Patients who have eyelid ptosis, ectropion, mophisto sign, diplopia, CSCR (central serous chorioretinopathy) following botulinum toxin A injection fot aesthetic purpose to forhead, around the eyes, and glabella evaluated as

complications of botulinum toxin a injection. Patients' age in years and sex; onset and duration time in week, side, and number of complications were evaluated.

**RESULTS:** Nine patients were female, 2 was male, age ranges between 35 years to 60 years with mean 46 years. Mean onset time of complication was 1,5 weeks ranges between 1-3 weeks. Mean duration time of disease was 5,5 weeks ranges between 1-12 weeks. Seven complications were right side and 9 were left side. Both side complications were in 5 patients. Eight patients had 1 complication (ptosis, diplopia, CSCR, or mophisto sign), 1 patient had 2 complications (ptosis and mophisto sign) and 2 patient had 3 complications (diploia, ptosis, and ectropion).

**CONCLUSIONS:** Since borulinum toxin A application incresed in cosmetic field, complications were incresed recently. Despite complications being temporary even without treatment, it serously might affect people's lifestyle who are obsessed with their appearance. Muscle dynamics knowledge is important

**Keywords:** botulinum toxin A complications, cosmetic, ptosis, mophisto sign, diplopia,CSCR

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25 - 26 October, 2024 Hotel Emerald, **Pristina, Kosovo** 

**OP-24** 

# **Evaluation of the Change in the Epiphora After Blepharoplasty in Patients with Dermatoschalasis in the Long Term**

Demet İyidoğan, Emre Aydemir

Department of Ophthalmology, Antalya City Hospital

**BACKGROUND AND AIM:** To compare changes in epiphora before and after surgery in patients with a diagnosis of dermatochalasis who underwent upper eyelid blepharoplasty.

**METHODS:** This prospective study comprised 51 patients who had epiphora and underwent surgery due to dermatochalasis. Dermatochalasis patients were divided into 3 subgroups according to marginal reflex distance (MRD4) Group 1: light ((MRD4>4 mm), Group 2: medium (MRD4: 2-4 mm) and Group 3: heavy (MRD4<2mm) recorded as. The epiphora of the patients was evaluated with the MUNK Scale. The MUNK score, schirmer test, the tear break up time (BUT) and the ocular surface disease index (OSDI) of patients were recorded preoperative and postoperative 6. months.

**RESULTS:** This prospective study included 51 patients with epiphora who underwent surgery for dermatochalasis. Dermatochalasis patients were divided into 3 subgroups according to the marginal reflex distance (MRD4): Group 1: mild (MRD4>4 mm), Group 2: moderate (MRD4: 2-4 mm) and Group 3: severe (MRD4<2 mm). Patients' epiphora was assessed using the MUNK scale. The MUNK score, Schirmer test, tear break-up time (BUT) and ocular surface disease index (OSDI) of the patients were recorded before and after 6 months.

**CONCLUSIONS:** According to the results of this study, ocular surface changes seem to be more common in patients with advanced dermatochalasis. In addition, blepharoplasty performed in patients with advanced dermatochalasis may be helpful in reducing epiphora.

**Keywords:** Dermatochalasis, Blepharoplasty, Epiphora

# 2nd Balkan Ophthalmology Meeting in conjunction with

4th KAO
National Congress

**25 - 26 October, 2024** Hotel Emerald, **Pristina, Kosovo** 



#### **OP-25**

### **Compression Dressing versus Non-compression Eye Pad after Blepharoplasty**

Fatma Poslu Karademir, Selvihan Sağdıç Özçelik, Ismail Diri, Ayşe Çetin Efe, Mehmet Göksel Ulaş Beyoğlu Eye Training and Research Hospital, Istanbul, Turkey

**BACKGROUND AND AIM:** To investigate the effect of a compression dressing on pain, ocular surface, edema, and ecchymosis following blepharoplasty.

**METHODS:** We conducted an observer-blinded, randomized controlled trial between May and August 2024. Exclusion criteria were previous upper eyelid surgery and previous eyelid trauma. 108 eyes of 54 patients were included in the study. After blepharoplasty, one eye of the patient was closed with a compression dressing, while the other eye was closed with a halved non-compression eye pad. Edema and ecchymosis were graded on a four-point scale by a blinded observer at 1 day (D1), 1 week (D7), and 4 weeks (D28) postoperatively. Aesthetic outcome was evaluated by the blinded observer using the Global Aesthetic Improvement Score at D1, D7, and D28. Postoperative pain was evaluated at D1 using a visual analog scale (0 to 10). Postoperative comfort with dressing or an eye pad was assessed on D1.

**RESULTS:** Blinded observer evaluations of ecchymosis, edema, and aesthetic outcome showed that at D1, ecchymosis and edema were significantly less, and aesthetic outcome was better in the compression bandage group (p<0.05 for each) but did not differ between the compression dressing and eye pad groups at D7 and D28 (P > 0.05 for each). Corneal staining was similar in both groups at all follow-ups (P > 0.05). Pain and patient comfort in the first 24 hours postoperatively were similar in both groups (P > 0.05 for each).

**CONCLUSIONS:** The results of our study show that compression dressing after blepharoplasty reduces ecchymosis and edema and improves aesthetic results in the short term, but there is no difference in the long term.

**Keywords:** Blepharoplasty, Compression Dressing, Eye Pad, Edema, Ecchymosis



# **FREE PAPERS-II**

26 October 2024 08.30-10.00 25 - 26 October, 2024
Hotel Emerald, Pristina, Kosovo



**OP-26** 

### **Examination of Retinal and Optic Disc Structures in Patients with Bipolar Disorder**

Birumut Gedik<sup>1</sup>, Elçin Süren<sup>2</sup>, Muhammet Kazim Erol<sup>2</sup>, Rojbin Ekinci Büber<sup>2</sup>, Süleyman Korkut<sup>3</sup>

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<sup>3</sup>Antalya Education and Research Hospital, Department of Psychiatry

**BACKGROUND AND AIM:** Bipolar disorder (BD) is a bipolar mental disorder characterized by two separate illness periods. The current study aimed to compare the vascular density values and retinal thicknesses of patients with BD and healthy individuals using optical coherence tomography angiography (OCTA).

**METHODS:** The study included 50 patients with BD who received inpatient and outpatient treatment at our psychiatry clinic and 50 healthy controls of similar age and gender are included. The patients didn't have any other psychiatric disease or comorbid diseases. All patients used only lithium as medication. The OCTA scans of the patient and control groups were examined.

**RESULTS:** The mean age of 50 patients with BD was calculated as  $37.92 \pm 8.25$ , and that of the control group was  $37.02 \pm 10.39$ . In the BD group, the total, parafoveal, and perifoveal density values of the deep capillary plexus, optic disc inside total vascular density, subfoveal choroidal thickness, and inner retina parafovea thickness were statistically significantly lower compared to the control group (p=0.001, p=0.001, p=0.014, p=0.019 p=0.038, respectively).

**CONCLUSIONS:** The lower retinal and optic disc vascular density and retinal thickness of patients with BD compared to healthy controls can be attributed to vascular damage. It is considered that inflammation, excessively produced cytokines, neurooxidative stress, and neurodegenerative changes play a role in the development of vascular damage. Furthermore, it can be suggested that due to decreased retinal blood flow, disruption of fluid-electrolyte balance, atrophy and apoptosis in photoreceptor cells may be effective in the lower subfoveal choroidal thickness and inner retina parafoveal thickness compared to the control group. Large-scale controlled studies are needed to understand whether these changes are drug-related or related to the pathogenesis of the disease. This study has the potential to serve as a guide for future research on the vascular pathogenesis of BD.

**Keywords:** Bipolar disorder, inflammation, optical coherence tomography angiography, retinal thickness, vascular density

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**OP-27** 

# **Evaluation of Choroidal Vascularity Index, Retinal and Optic Nerve Changes in Erectile Dysfunction**

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**BACKGROUND AND AIM:** To report the choroidal changes by evaluating subfoveal choroidal thickness (SFCT) and choroidal vascularity index (CVI), optic nerve changes by evaluating peripapillary retinal nerve fiber layer (RNFL) and macular changes by evaluating ganglion cell layer (GCL) in erectile dysfunction patients and to compare these findings with age-matched healthy volunteers.

**METHODS:** A total of 30 eyes of 30 patients with a diagnosis of erectile dysfunction were included in this study. The diagnosis was made by evaluation of the The International Index of Erectile Function-15 questionnaire. Spectral-domain optical coherence tomography (SD-OCT) imaging was performed to evaluate the peripapillary RNFL and GCL, and images were acquired and processed with the image-j program to calculate CVI. Measurements were compared with those of 30 age-matched healthy volunteers.

**RESULTS:** RNFL thickness values in the inferior, superior and nasal quadrants and CVI values were found to be statistically significantly lower in the erectile dysfunction group compared to the control group (p<0.001, p=0.006, p<0.001, p<0.001). GCL thickness values in all quadrants and SFCT values were observed to be lower in the erectile dysfunction group compared to the control group. However, the difference was not statistically significant. In addition, a moderate positive correlation was found between the CVI and erectile function (r=0.473, p=0.008).

**CONCLUSIONS:** RNFL and CVI may be valuable markers in addition to questionnaires in the diagnosis of erectile dysfunction. Furthermore, due to the rapid, repeatable and non-invasive nature of the SD-OCT device, RNFL and CVI measurements may act as predictive factors in erectile dysfunction.

**Keywords:** Choroidal vascularity index, erectile dysfunction, optic nerve, spectral-domain optical coherence tomography.

25 - 26 October, 2024
Hotel Emerald, Pristina, Kosovo



**OP-28** 

# Comparison Of Structural And Vascular Characteristics Of The Macula In Dominant And Non-Dominant Eyes

Abdullah Erdem<sup>1</sup>, Şule Acar Duyan<sup>1</sup>, Ayse Bozkurt Oflaz<sup>1</sup>, Emine Tinkir Kayitmazbatir<sup>1</sup>, Ugur Acar<sup>2</sup>

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**BACKGROUND AND AIM:** Ocular dominance is the tendency to prefer visual input from one eye over the other. Images are perceived as more clear, and larger by the dominant eye.Indications for determining ocular dominance include monovision applications, laser refractive surgery and contact lens applications. It is not known whether the macula affects ocular dominance or ocular dominance affects the macula. The aim of our study is to compare retinal microvascular findings between dominant and nondominant eyes using an OCTA device.

**METHODS:** Fourty healthy individuals included in this study.SS-OCT Angiography images were obtained. From the obtained OCTA images; superficial capillary plexus density, deep capillary plexus density, choriocapillaris density, superficial and deep foveal vascular zones, central macular thickness and subfoveal choroidal thickness were examined. The eyes of the patients were divided into dominant and nondominant groups and the specified parameters were compared between the two groups.

**RESULTS:** A total of 40 patients were included in this study. The mean age of the patients was  $23.95\pm3.39$  years. It was determined that 70% (n=28) of the patients were female, 30%(n=12) were male; 65% (n=26) had right eye dominance and 35% (n=14) had left eye dominance. Statistical analysis of the OCTA measurements of the dominant and nondominant eyes of included patients did not reveal any significant differences (p>0.05).

**CONCLUSIONS:** There are some studies in the literature evaluated parameters such as central corneal thickness, axial length and optic disc parameters but OCTA findings were not examined. Although there are studies regarding ocular dominance involving ocular morphological and functional parameters, meaningful results that reflect on clinical practice are still limited. In conclusion, our study did not find significant differences in OCTA parameters between dominant and nondominant eyes. This findings suggest that retinal microvasculature may not be influenced by ocular dominance; however, further studies are needed.

**Keywords:** dominance, optical coherence tomography angiography, retinal vasculature

# 2nd Balkan Ophthalmology Meeting in conjunction with 4th KAO National Congress

25 - 26 October, 2024

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### **OP-29**

# Evaluation of Choroidal Thickness and Choroidal Vascular Index by Optical Coherence Tomography in Patients With Morbid Obesity and Comparison with Healthy Controls

Burcu Işık

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**BACKGROUND AND AIM:** To investigate the effect of morbid obesity on choroidal thickness (CT) and choroidal vascular index (CVI).

**METHODS:** This prospective study included 25 patients with morbid obesity and 25 healthy controls. The morbid obesity patient group comprised of patients with body mass index (BMI) of ≥40 kg/m2 who did not have systemic and neurological diseases other than obesity-related comorbidities. Healthy adults with BMI values ranging from 18.5 to 24.99 kg/m2 were included in the control group. The right eye of the participants were evaluated with enhanced depth imaging optical coherence tomography (EDI-OCT) in order to measure CT, total choroidal area (TCA), luminal area (LA) and CVI.

**RESULTS:** Mean CT values in the morbid obesity (study group) and healthy subjects (control groups) were  $362.2 \pm 52.8 \, \mu m$  and  $426.8 \pm 74.5 \, \mu m$ , respectively (p = 0.001). TCA and LA values were smaller in morbid obesity group (p < 0.001). CVI did not differ between the study and control groups (p = 0.367). An inverse correlation was found between CT and BMI (r = -0.696, p < 0.001). There was no correlation between CVI and BMI.

**CONCLUSIONS:** This study showed that morbid obesity was associated with lower CT value, and patients with higher BMI tended to have lower CT. However, there was not a significant difference in terms of CVI was between morbid obesity patients and healthy controls.

**Keywords:** morbid obesity, optical coherence tomography, choroidal thickness, choroidal vascularity index

# Comparison of choroidal and retinal microvascular changes during pregnancy and postpartum period with optical coherence tomography angiography

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<sup>2</sup>Department of Gynecology and Obstetrics, Kepez State Hospital, Antalya, Turkey

**BACKGROUND AND AIM:** To investigate choroidal and retinal blood flow and thickness changes using Optic Coherence Tomography Angiography (OCTA) during pregnancy and postpartum period

**METHODS:** In this study we included 25 pregnant patients. We prospectively recorded their measurements in the first trimester, last trimester and sixth month postpartum. Retinal thickness (RT), choroidal thickness (CT), foveal avascular zone (FAZ) area, superficial and deep capillary plexus (SCP, DCP) vessel density(VD), choriocapillaris (CC) VD measurements were evaluated with OCTA (DRI OCT Triton; Topcon Corp, Toyko, Japan)

**RESULTS:** The choroidal thickness of the patients decreased statistically significantly in the postpartum period (p: 0.035). There were statistically significant differences between trimesters in SCP VD (p: 0.001). SCP central VD decreased in the 3rd trimester and returned to the first trimester level in the postpartum period There were differences between the groups in deep capillary plexus VD values (p < 0.05). DCP central VD decreased from the 1st trimester to the 3rd trimester and continued at the same level at the postpartum period. FAZ area increased statistically significantly in the third trimester compared to the first trimester and was similar in the postpartum period (p: 0.03). CC VD increased towards the 3rd trimester and continued similarly to the 3rd trimester in the postpartum period (p < 0.05).

**CONCLUSIONS:** In this study, pregnant women were prospectively examined during pregnancy and the postpartum period and significant microvascular changes were detected. We think that both the increase in blood volume and hormonal changes may have caused these vascular changes.

**Keywords:** Optic coherence tomography angiography, pregnancy, vascular density, retina, choroid



Deep Learning Assisted Analysis of OCT Biomarker Changes in Recalcitrant Neovascular Age Related Macular Degeneration after Switch to Faricimab

Ben Asani



### **Anti VEGF Revolution, Progress and Challenges**

Belinda Pustina <sup>1</sup>, Suzana Buçinca <sup>1</sup>, Mentor Gorani <sup>1</sup>, Lisa Qurdina <sup>1</sup>, Fjolla Bokshi <sup>1</sup>
(1) University Clinical Center of Kosova, Eye Clinic, Prishtina, Kosova

**Introduction:** The anti-VEGF revolution has transformed the management of retinal diseases, notably Age-related Macular Degeneration (AMD) and Diabetic Macular Edema (DME). Our study at the University Clinical Center of Kosovo aimed to evaluate the efficacy of Bevacizumab, Faricimab, and Brolucizumab in these conditions while assessing the challenges faced in treatment.

**Methods:** We analyzed treatment records comprising Bevacizumab injections annually for AMD and DME, alongside injections for Retinopathy of Prematurity (ROP). The study also included effectivity of the new injections, Faricimab and Brolucizumab, focusing on anatomical and functional outcomes and injection frequency.

**Results:** Our results indicate that the center administers approximately 3,000 Bevacizumab injections annually for AMD and DME, demonstrating its critical role in preserving vision in these populations. Additionally, 20 injections were provided for retinopathy of prematurity (ROP), highlighting the expanding application of anti-VEGF therapy. While the effectiveness in reducing retinal edema and improving visual acuity is evident Bevacizumab continued to demonstrate significant efficacy in managing AMD and DME. However, Faricimab and Brolucizumab showed promising results, with improved patient outcomes and reduced injection intervals, indicating a potential shift in standard treatment practices.

**Conclusion:** While Bevacizumab remains a cornerstone in the treatment of retinal diseases, the advent of novel anti-VEGF agents like Faricimab and Brolucizumab represents a potential revolution in retinal therapy, though challenges in accessibility and cost persist. Future studies should focus on long-term outcomes and broader applications of these newer treatments.

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**OP-34** 

### Subretinal Injection to Treat Submacular Hemorrhage Secondary To Age-Related Macular Degeneration and Case Series

Vigan Roka

This case series describes the effectivity of subretinal injection of recombinant tissue plasminogen activator and pneumatic displacement of the subretinal hemorrhage in combination with intravitreal injection of bevacizumab to treat the submacular hemorrhage secondary to age-related macular degeneration. All the surgeries were performed at the same center and by the same surgeon. The standard management in all cases was pars plana vitrectomy (25G), subretinal injection of recombinant tissue plasminogen activator using a 25G cannula with 31G tip, fluid-air exchange, intravitreal injection of bevacizumab and SF6 tamponade followed by postoperative supine position in the first hour and then prone position for the next 48 hours. The morphologic results were satisfactory in every case. The functional results seem to be closely related to the interval between submacular hemorrhage occurrence and surgery.

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**OP-35** 

## Intravitreal Dexemetasone Implant for the Treatment of Diabetic Macular Edema in Eyes with Intraocular Silicone Tamponade

Büşra Kaya Adaş, Güzide Akçay, Hatice Selen Kanar Kartal City Hospital, İstanbul, Turkey

**BACKGROUND AND AIM:** To investigate the efficacy and safety of intravitreal (IV) dexemetasone (DEX) implant in the treatment of postoperative diabetic macular edema (DME) in eyes that underwent pars plana vitrectomy (PPV) and implanted silicone tamponade due to diabetic tractional retinal detachment (TRD)

**METHODS:** This study included 28 eyes of 28 patients with PPV due to diabetic TRD and DME requiring treatment in the postoperative period, who were implanted with silicone tamponade. IV DEX was implanted for the treatment of DME while the patients had silicone tamponade. Patients' best corrected visual acuity (BCVA), intraocular pressure (IOP), history of preoperative Anti-vascular endothelial growth factor (Anti-VEGF) injection, presence of preoperative DME, preoperative vitreomacular interface disorders, internal limiting membrane peeling during PPV, DME development times, central macular thickness (CMT), and DME recurrence after silicone removal were recorded. Patients who were followed up for at least 6 months after DEX implantation were included in the study.

**RESULTS:** Before IV DEX, mean BCVA was  $1.08\pm0.17$  Log MAR and mean CMT was  $487.23\pm79.44$  µm. Mean time between IV DEX after PPV was  $69.30\pm18.82$  days. Visual acuity at 1 month after IV DEX was  $0.89\pm0.12$  log MAR (p: 0.012) and CMT was  $326.67\pm91.26$  (p<0.001). Before IV DEX, IOP was  $18.30\pm4.24$ mmHg, and at 1 month, IOP was  $19.66\pm5.11$ mmHg (p0.72). After silicone removal, the patients' 1st month visual acuity was  $0.77\pm0.19$  log MAR and CMT:  $319.55\pm82.47$  microns. After silicone removal, dex implants were applied again to 7 eyes. The film was peeled off in 5 of these 7 eyes.

**CONCLUSIONS:** Dex implant has been found to be effective and reliable in reducing macular edema in eyes with silicone tamponade and diabetic macular edema after PPV. Since there is a risk of increased macular edema after intraocular surgery such as silicone removal in eyes with macular edema, reducing edema with dex implant before silicone removal seems to be a rational approach.

**Keywords:** silicone tamponade, intravitreal (IV) dexemetasone (DEX) implant, diabetic tractional retinal detachment (TRD), diabetic macular edema (DME)



### **Clinical Features of Children with Optic Disc Swelling**

Pınar Bingöl Kızıltunç, Ayzen Şeyma Kayacı, Huban Atilla Department of Ophthalmology, Ankara University, Ankara, Turkey

**BACKGROUND AND AIM:** Evaluation of true and pseudopapilledema findings in children presenting with optic disc swelling.

**METHODS:** Data and optical coherence tomography findings of patients under 18 years of age with optic disc swelling were retrospectively analyzed.

**RESULTS:** Sixty-one patients were included in the study. While 21 patients (34.4%) had no complaints at the time of presentation, the others had headache, vomiting, dizziness, blurred vision, strabismus and double vision. Disc edema was bilateral in 56 patients (91.8%) and unilateral in 5 (8.1%). When refractive error was evaluated, 24 (39.34%) were emmetropic, 27 (44.26%) were myopic, and 10 (16.4%) were hypermetropic. Thirty-four patients (55.7%) had pseudotumor cerebri (PTC), and 2 (3.3%) had hydrocephalus, resulting in 36 patients (59%) with true papilledema. Eleven (18%) had optic disc drusen, 6 (9.8%) had peripapillary ovoid-like hyperreflective mass (POHMS), 5 (8.2%) had tilted disc, and 3 (4.9%) had hypermetropic disc, indicating pseudopapilledema. While the etiology of 30 patients (88.2%) diagnosed with PTC was idiopathic, the etiology of 4 (11.8%) included cerebral venous thrombosis, Behçet's Disease, and the use of growth hormone and thyroid hormone. Of the patients diagnosed with PTC, 12 (35.3%) also presented with POHMS and 2 (5.8%) presented with optic disc drusen. POHMS was detected in a total of 20 patients, with 13 (65%) having myopia, 6 (30%) having emmetropia, and 1 (5%) having hypermetropia. The average retinal nerve fiber layer thickness was 130 μm in patients with true papilledema and 115.3 μm in patients with pseudopapilledema.

**CONCLUSIONS:** True papilledema was detected in more than half of the children presenting with optic disc swelling. It should not be forgotten that PTC may be present in children with optic disc drusen and POHMS, and patients presenting with symptoms suggestive of PTC should undergo appropriate investigations to confirm the diagnosis.

**Keywords:** Optic disc drusen, Papilledema, Pseudopapilledema, Pseudotumor cerebri, Peripapillary ovoid like hyperreflective mass

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### **OP-37**

### Assessment of the effects of two commonly used mydriatics on the macular and peripapillary microvascular systems of healthy children: An Optical **Coherence Tomography Angiography Study**

Yara Chiekhismailzadeh<sup>1</sup>, Sevim Ayça Seyyar<sup>1</sup>, Gizem Gürbostan Soysal<sup>2</sup>, Burçak Balyemez<sup>1</sup>, Kıvanç Güngör<sup>1</sup>

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**BACKGROUND AND AIM:** To evaluate the effects of pupil dilation caused by topical applications of 2.5% phenylephrine and 0.5% tropicamide on retinal microvascularization using optical coherence tomography angiography (OCTA).

**METHODS:** Healthy children were included in this prospective observational study. Baseline OCTA measurements were taken for all children before dilatation. Then they were randomly divided into two groups, the tropicamide group given 0.5% tropicamide solution and the phenylephrine group given 2.5% phenylephrine solution. After dilation OCTA images were taken for the second time from all children.

**RESULTS:** The effect of dilation using two different mydriatic agents caused a decrease in mean radial peripapillary capillary density (RPC-VD) and superior RPC-VD (p=0.008 and p=0.001). Remarkably, this reduction due to dilatation was also determined to be caused by the combined effect of both mydriatic agents (p=0.016 and p=0.013). Although phenylephrine showed a slightly greater decrease than tropicamide, the effects of the two mydriatic drugs were not superior to each other (p=0.166 and p=0.167).

**CONCLUSIONS:** Dilation with 2.5% phenylephrine or 0.5% tropicamide significantly decreased mean RPC-VD and superior RPC-VD. Although there was no statistically significant difference between the two mydriatic agents, phenylephrine caused a greater reduction than tropicamide. This effect of dilation and phenylephrine on VD should be considered in studies using OCTA and focusing on peripapillary areas.

**Keywords:** Phenylephrine, tropicamide, pupil dilation, mydriatic agent, radial peripapillary capillary vascular density, optical coherence tomography angiography

**National Congress** 

25 - 26 October, 2024 Hotel Emerald, Pristina, Kosovo



#### **OP-62**

### When Uveitis Isn't What It Seems: A Year of Diagnostic Challenges with **Neoplastic Masquerade Syndromes**

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**BACKGROUND AND AIM:** The term "masquerade syndrome" refers to conditions characterized by the presence of intraocular infiltrative cells not mediated by immune-mediated uveitis. Primary vitreoretinal lymphoma (PVRL) is the most common cause of neoplastic masquerade syndromes. Although these syndromes represent a minority of cases seen and treated in uveitis clinics, early and accurate diagnosis can be life-saving for these patients.

**METHODS:** Case Series

**RESULTS:** Four of the five cases were PVRL, and the mean age of these patients was 61.2 years, with 2 female and 2 male patients. Two were diagnosed via retinochoroidal biopsy and the third through cytology. In the fourth case, the patient presented with a year-long history of vitritis in the right eye and an atypical melanocytic lesion in the left eye, raising suspicion of choroidal lymphoma. A retinochoroidal biopsy was performed, but immunohistochemical staining indicated an indeterminate melanocytic choroidal tumor with malignant potential. MRI findings were consistent with CNS lymphoma, and a stereotactic brain biopsy confirmed the diagnosis. The final case involved a patient initially treated with topical steroids for anterior uveitis, who was later diagnosed with iridociliary melanoma. Gonioscopy revealed angle invasion, and UBM showed a ciliary body mass, leading to referral for radioactive plaque therapy.

**CONCLUSIONS:** There are significant, distinguishable differences in the presentation of patients with neoplastic masquerade syndromes compared to those with uveitis. These include older age, unilateral or bilateral asymmetric involvement, associated systemic symptoms, and a higher likelihood of posterior segment involvement. In elderly patients with vitritis who show partial improvement followed by deterioration on steroid therapy, the possibility of PVRL should be considered. Performing biopsies from areas identified by OCT as non-atrophic and with subretinal, sub-RPE, or intraretinal lesions increases the likelihood of obtaining a pathological diagnosis.

**Keywords:** masquerade syndromes, uveitis, primary intraocular lymphoma, primary vitreoretinal lymphoma



# **FREE PAPERS-III**

26 October 2024 10.00-11.30

# Comparison of Macular Ganglion Cell-Inner Plexiform Layer Thickness and Sectoral Ratio Asymmetry with Different Glaucoma Types and Early Detection of Early Glaucomatous Defects in Healthy Eyes

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**BACKGROUND AND AIM:** Glaucoma is characterized by progressive loss of retinal ganglion cells and their axons. A large body of evidence suggests that structural changes can be detected several years before measurable visual loss. The performance of regional macular ganglion cell-inner plexiform layer (GCIPL) thickness measurements is comparable to that of retinal nerve fiber layer (RNFL) thickness for detecting early glaucoma. Our purpose is to evaluate the difference between GCIPL and RNFL thickness and sectoral ratio asymmetry using optical coherence tomography (OCT) in patients with different glaucoma types and early detection of early glaucomatous defects in healthy eyes.

**METHODS:** This cross-sectional retrospective single-center study consisted of 188 eyes of 188 patients with glaucoma and 24 eyes of 24 controls. OCT measured the thickness of the macular GCIPL, RNFL and sectoral ratios were calculated. Each parameter's area under the receiver operating characteristic curve (AROC) was compared between the glaucoma subgroups and the healthy group.

**RESULTS:** The mean age of the entire group was  $63.09 \pm 11.98$  (18 - 90) years. Demographic and clinical parameters are shown in Figure 1. In glaucomatous cases, both average GCIPL value and sectoral GCIPL were affected. The most acceptable parameters that distinguished all glaucomatous cases from healthy cases were calculated as, inferotemporal GCIPL (AUC=0.714), average GCIPL (AUC=0.711), superior GCI-PL (AUC=0.708), and superotemporal GCIPL (AUC=0.706) values (Figure 2).

**CONCLUSIONS:** GCIPL thinning is evident in the inferior and temporal portions of the fovea in patients with early glaucoma, and the pattern of macular damage is arcuate in shape, that is macular damage appears first in the temporal portion of the fovea and then approaches the optic nerve head. Evaluation of the average and minimum thickness of the GCIPL and sectoral thickness may be useful in the early distinction of glaucomatous cases from healthy cases.

**Keywords:** Ganglion cell-inner plexiform layer, Glaucoma, Sectoral asymmetry



# **Evaluation of Optic Nerve Head Morphology of Small Optic Discs in Healthy eyes Using Different Optical Coherence Tomography Parameters**

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**BACKGROUND AND AIM**: To evaluate Bruch's Membrane Opening – Minimum Rim Width (BMO-MRW), retinal nerve fiber layer (RNFL) thickness, and ganglion cell complex (GCC) in small optic discs (≤ 1.60 mm2).

**METHODS:** Healthy eyes with normal IOP and no ocular pathology were selected for the study. RNFL at diameters of 3.5 mm, 4.1 mm and 4.7 mm, and BMO-MRW were analysed using Heidelberg optical coherence tomography (OCT; Spectralis; Heidelberg Engineering, Heidelberg, Germany) with Glaucoma Module Premium Edition. RNFL and GCC using Cirrus HD-OCT (Carl Zeiss Meditec, Inc., Dublin, CA, USA) were also analysed for the same eyes. Eyes with an optic disc area  $\leq$  1.60 mm2 are grouped as Group1, and eyes that have an optic disc area between 1.60-2.50 mm2 are grouped as Group2.

**RESULTS:** There were 92 (56.4%) eyes in group 1 and 71 (43.6%) eyes in group 2. The mean age, axial length, or refractive error was similar in both groups (p> 0.05 for all). Disc area, rim area and average Cup/Disk ratio were significantly higher in Group 2 (p<0.05 for all). No difference was presented between the groups in all quadrants in terms of RNFL measurements of 3.5 mm, 4.1 mm and 4.7 mm diameters measured with Heidelberg OCT, and there was no difference in RNFL and GCC measured with Cirrus OCT in all quadrants (p>0.05 for all). The global BMO-MRW was  $380.5\pm57.9$  (247-527)  $\mu$ m in Group 1 and  $348.1\pm47.9$  (247-476)  $\mu$ m in Group 2, BMO-MRW in all quadrants were significantly higher in Group 1(p<0.05 for all).

**CONCLUSIONS:** There was no difference between small and normal-sized optic discs in terms of RNFL at diameters of 3.5 mm, 4.1 mm and 4.7 mm and GCC measurement. BMO-MRW in all quadrants were significantly higher in small optic discs.

**Keywords:** Small optic disc, Retinal nerve fiber layer, Ganglion cell complex, Bruch's Membrane Opening

## Lamina Cribrosa Thickness and Ocular Biometric Parameters Affecting Lamina Cribrosa Thickness in Different Glaucoma Stages

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**BACKGROUND AND AIM:** It is known that the lamina cribrosa(LC) plays a significant role in the aetiology of glaucoma. It is hypothesised that the thickness and configuration of the lamina cribrosa may be influenced by the stage of glaucoma and ocular biometric parameters. The objective of this study was to examine the thickness of the LC in glaucoma patients at different stages of the disease and to determine the relationship between these measurements and ocular biometric parameters.

**METHODS:** This cohort study was conducted with 66 eyes of 36 glaucoma patients. Pachymetry, iridocorneal angle were measured with Sirius (CSO,Florence,Italy); axial length, anterior chamber depth(AC-D),corneal diameter were measured with IOL Master (Carl Zeiss Meditec,Dublin,California). For all participants, LC thickness and peripapillary retinal nerve fiber layer(RNFL) analysis were measured using the SD-OCT(Heidelberg Engineering,GmbH,Dossenheim,Germany). Patients were divided into 3 groups as early, moderate and advanced according to the mean deviation on the visual field test.

**RESULTS:** Of the 66 eyes, 31 had early, 11 had moderate, and 24 had advanced-stage glaucoma. The mean LC thickness of all eyes was  $213.55\pm37.352~\mu m$ . There was no statistically significant difference between the LC thickness of glaucoma patients at different stages. As the stage increased, RNFL thickness decreased and the C/D ratio increased (p<0.05). A negative correlation was observed between LC thickness and ACD (p<0.05). Furthermore no correlation was identified between LC thickness and RNFL, the c/d ratio and MD, which are used to detect glaucoma progression.

**CONCLUSIONS:** Compared to the literature, the LC thickness of the glaucoma patients included in the study was found to be lower than the normal range, but there was no significant difference in the LC thickness between different glaucoma stages. It can be concluded that the thickness of the LC plays an important role in the aetiology of glaucoma, but does not significantly affect its progression.

**Keywords:** Lamina Cribrosa, glaucoma, progression

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25 - 26 October, 2024 Hotel Emerald, Pristina, Kosovo



#### **OP-41**

### Trabeculectomy as the Gold Standard in the Surgical Treatment of Glaucoma

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Glaucoma is a complex neuropathic disease that leads to irreversible changes that directly damage vision. Worldwide, there are over 65 million people diagnosed with various types of glaucoma. The two main divisions of glaucoma are primary glaucoma, which can be open-angle and closed-angle, and secondary glaucoma caused by other conditions. Another type of glaucoma recently discovered is normal tension or normotensive glaucoma.

Glaucoma treatment can be managed through local eye drops and sometimes tablets, which includes conservative treatment, laser treatments and surgical treatments.

Regarding the surgical treatment of glaucoma, trabeculectomy still remains as a basic surgical treatment compared to canaloplasty and the implantation of various devices such as shunts and valves.

In our study we documented and analyzed the patient data that we took for study, we also made research from different databases that testify to the impact of the surgical treatment of glaucoma through trabeculectomy in reducing the intraocular pressure and improving the life of these patients.

A 56-year-old male patient was diagnosed with open-angle glaucoma 2 years ago and was treated conservatively, but without success in lowering and stabilizing intraocular pressure. From the examinations, anamnesis, visual acuity, tonometry, gonioscopy, OCT were obtained.

After the surgical intervention - trabeculectomy in the patient, it was successfully achieved to reduce the pressure to 17.3-18.9 mmHg in the right eye by eliminating local therapy.

**Key words:** glaucoma, intraocular pressure, OCT, trabeculectomy.

# **Evaluation of Long-Term Results of Transscleral Diode Laser Cyclophotocoagulation in End-Stage Glaucoma Cases with Poor Visual Potential**

Arta Shukriu, Büşra Yılmaz Tuğan, Nurşen Yüksel Kocaeli University, Department of Ophthalmology, Kocaeli

**BACKGROUND AND AIM:** Cyclodestructive procedures are generally performed for end-stage glaucoma with poor visual potential and/or in patients with inadequate intraocular pressure control (IOP) after glaucoma surgery. The success rate of transscleral diode laser cyclophotocoagulation (TDLS) has been reported as 35-85%. In this study, we aimed to evaluate the effectiveness of TDLS in end-stage glaucoma cases with poor visual potential.

**METHODS:** The 5-year results of patients who underwent TDLS in the glaucoma clinic between January 2013 and December 2021 and had at least 1 year of follow-up were evaluated. Success was defined as IOP of 20 mmHg or less after treatment with or without topical medications. An additional success criterion was pain relief in eyes with poor vision and in eyes with corneal scarring that prevents accurate measurement of IOP.

**RESULTS:** 46 (45.5%) of patients were male and 55 (54.5%) were females with a mean age of 61.1±18.6 years. The mean follow-up period was 30.8±20.7 months. The most common indications were primary open-angle glaucoma in 36 (35.6%) eyes, neovascular glaucoma in 35 (34.7%) eyes, and glaucoma secondary to trauma in 13 (12.9%) eyes. 90 (89.1%) eyes had hand movement vision level or below before treatment. The mean IOP in the 1st (18.2±9.0 mmHg), 2nd (14.6±8.1 mmHg), 3rd (14.4±8.0 mmHg) and 5th year (14.0±8.5 mmHg) after TDLS was significantly lower than the pre-TDLS IOP (35.5±8.3 mmHg) (p<0.001 for all). The mean number of antiglaucoma medications in the 1st, 2nd, 3rd and 5th year after TDLS was significantly less than pre-TDLS mean number of antiglaucoma medications (p<0.001 for all). While 79 (78.2%) eyes met the success criteria at the last follow-up examination, 21 (20.8%) eyes were considered unsuccessful. Hypertony (28.7%) and hypotony (6%) were the most common complications.

**CONCLUSIONS:** TDLS is a safe and effective method for lowering long-term IOP and reducing the number of antiglaucoma medications used in end-stage glaucoma patients with poor visual potential.

**Keywords:** glaucoma, transscleral diode laser cyclophotocoagulation, cyclodestructive

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National Congress

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#### **OP-43**

# Cyclocyotherapy as Emergency Therapeutic Response in to the Patient With NV Glaucoma Caused By CRVO-Case Report

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Glaucoma is the world's number one cause of irreversible blindness. Worldwide, there are over 65 million people diagnosed with various types of glaucoma. According to the latest definitions, it is a neuropathic progressive disease of the optic nerve.

Neovascular glaucoma is a serious and aggressive form of glaucoma that has rapid progression and manifestations. The main symptoms are high eye pressure, pain, redness and the appearance of small vessels in the iris.

There are various treatments for this disease, but mainly they are aimed at relieving the symptoms or reducing the progression of the disease. The most important therapeutic options, apart from anti-glaucoma drugs, are the application of anti-VEGF therapy and cyclodestructive treatments, which enable the reduction of intraocular pressure and alleviation of symptoms, thus enabling patients to have a better quality of life.

The aim of our study was to prove the impact of cyclocryotherapy in reducing intraocular pressure in a 43-year-old female patient with neovascular glaucoma of the left eye. The pressure before the intervention was 41.4 mmHg, while after the intervention it decreased to 26.6 mmHg, also the symptoms such as pain and redness subsided.

**Key words:** Neovascular glaucoma, retinal vein occlusion, cyclo-cryotherapy.



### **Duane Syndrome Treatment**

Mentor Ilazi

**Introduction:** Duane syndrome is a form of restrictive strabismus, with neural etiology. It appears from birth and is caused by the lack of innervation of the lateral rectus muscle by the Abducens nerve. It is usually caused by the agenesis of the nucleus of this nerve. In these cases nerve fibers of the Oculomotor nerve destined for the medial rectus muscle, partially and at the same time, innervate the lateral rectus muscle.

**Case presentation:** We are going to present the case of a 17 years old, female patient, who presents with Duane 2 in the right eye and Duane 1 in the left eye. In the primary position, there was exotropia of the right eye. During the attempt of right eye adduction, eye retraction and narrowing of the palpebral fissure was very pronounced. Recession of the two horizontal muscles (more of the LRM) is planned. During the surgical procedure, it was decided to perform only LRM recession.

**Conclusion:** After the surgical intervention, there was a significant improvement in the position of the eyes in the primary position. There was also a reduction in eye retraction and narrowing of the palpebral fissure during adduction.

**Keywords:** Ocular torticollis, Eye retraction, Horizontal rectus muscle recession.

# " Evaluation of the Validity and Reliability of the Turkish Version of the Adult Strabismus Quality of Life Questionnaire (AS-20)"

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**BACKGROUND AND AIM:** The aim of this study is to evaluate the validity and reliability of the Turkish version of the Adult Strabismus Quality of Life Questionnaire (AS-20), developed by Sarah R. Hatt. The suitability of the questionnaire translation to Turkish culture and language structure, as well as the psychosocial and functional effects of strabismus on adult patients, were examined.

**METHODS:** This prospective study included patients over the age of 15 who presented to Marmara University Hospital and were recommended for strabismus surgery. The patients completed the Adult Strabismus Quality of Life Questionnaire (AS-20) before and after surgery. The AS-20 uses a 5-point Likert scale and has two subscales (psychosocial, functional). The reliability and validity of the AS-20 were assessed using confirmatory factor analysis and SPSS software, and Cronbach's α values were calculated.

**RESULTS:** 69.6% of the participants were female (n=39), with a mean age of 30.3 (SD=13.6). 82.7% of the patients (n=43) had exotropia. The scale demonstrated high internal consistency, with Cronbach's  $\alpha$  for the total scale being 0.883 and McDonald's  $\omega$  being 0.884. The highest item-rest correlation was recorded at Item 4 (0.777) and the lowest at Item 8 (0.486). Factor loadings indicated that most items exhibited high to moderate factor loadings. According to Bartlett's Test of Sphericity ( $\chi^2$ =644, df=190, p<.001), there is a statistically significant relationship among the scale items. The KMO (Kaiser-Meyer-Olkin) measure of sample adequacy was 0.713. Comparisons of scores before and after the strabismus operation showed statistically significant differences in all scores, with notable improvements observed in the psychosocial domain.

**CONCLUSIONS:** This study demonstrates that the Turkish translation of the AS-20 can be used as a valid and reliable tool for measuring the quality of life in Turkish adult strabismus patients and that strabismus surgery positively affects the quality of life in adult patients.

**Keywords:** Quality of Life, Strabismus, Validity,

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### **OP-46**

### **V Patern Horizontal Strabismus with Inferior Oblique Overaction**

Mirlinda Kubati Ajeti, Mentor Ilazi, Shend Ajeti

**Introduction:** Inferior oblique muscle overaction (IOOA), often accompanies horizontal strabismus. It can be primary or secondary as a result of paresis of the trochlear nerve. In both cases, the treatment of the V pattern, associated with IOOA, consists in the surgical weakening of this muscle and in certain cases intervention in the rectus horizontal muscles.

**Case presentation:** The first patient presents with esotropia and bilateral IOOA. Ductions were normal while versions IOOA +2 in both eyes. In Prism Cover Test (PCT), in the primary position there was orthophoria with 45 prism diopters (pd), in upgaze 30 pd, in downgaze 60 pd. Medial rectus muscle recession was performed in both eyes as well as inferior oblique muscle myectomy in both eyes.

The second patient presents with exotropia (XT) and bilateral IOOA. The ductions were normal, while versions in both eyes were IOOA +2. The Bielschowsky test was negative. During the surgical procedure we performed recession of the lateral rectus muscles and recession of the inferior oblique muscles.

**Conclusion:** Recession of the inferior oblique muscle has reduced half of the V Pattern.

Based on the second case, we conclude that when the surgical intervention is performed simultaneously on the horizontal and inferior oblique muscles, the intervention on the horizontal muscles should be based on the measurements of the angle in the primary position and be independent of the intervention on the inferior oblique.

**Keywords:** Oblique muscles, V Pattern, Inferior oblique overaction, Recession of rectus horizontal muscles, Recession of oblique muscles.

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**OP-47** 

### Sensory exotropia

Dr. Dec. Alketa Tandili (1), Prof. Gabor Scharioth (1), VAlbon Ajazaj (2) Prof. Asc Afrim Shabani Institute of Ophthalmology - German Eye Clinic Pristina- Tirana

**Purpose:** to refer patients treated in our Clinic with exotropia, which occurs in eyes with poor vision.

Methods: We present 3 cases with different pathologies, patients who suffered from distortion of one eye. We examined them and diagnosed them as Sensory Exotropia.

Results: First case: We surgically treated with retroposition of the MRL and resection of the MRM of the eye with poor vision in the patient diagnosed with "Morning Glory" syndrome, a congenital abnormality of the optic disc.

Second case: The other patient with sensory exotropia was diagnosed with bilateral macular toxoplasmosis, for which he was referred to a pediatric infectious disease doctor, he also continues regular follow-ups in our Clinic.

Third case: While the most difficult case was diagnosed as retinal detachment with sensory exotropia. After treatment with vitreo-retinal surgery and "Scleral buckle" we managed to successfully treat exotropia as well.

**Conclusions:** Sensory exotropia is a deviation in low vision eyes. If the primary cause is untreatable we can treat the distortion surgically, otherwise we must be careful in diagnosing and treating the cause that has led to the lowered appearance.

### **Optical Filters Preferences in Low Vision Rehabilitation**

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**BACKGROUND AND AIM:** Patients with low vision may prefer to use filtered glasses to prevent photophobia or enhance contrast. The aim of this study is to determine which optical filters are more commonly preferred among patient groups with albinism, cone dystrophy (CD), Stargardt disease (SD), age-related macular degeneration (AMD), and retinitis pigmentosa (RP).

**METHODS:** Patient records of the patients with low vision followed at Low Vision Rehabilitation Center from 2019 to 2023 were evaluated. All patients underwent a full ophthalmological examination along with a low vision assessment, and were tested with 450, 480, 500, 540, 550, 600 nm filters to determine the most comfortable filters for indoor and outdoor environments.

**RESULTS:** The mean ages of the patients were as follows: albinism 17.11  $\pm$ 14.15, CD 17.42  $\pm$ 13.70, SD 25.28  $\pm$ 16.07, AMD 77.99  $\pm$ 8.19, RP 40.24  $\pm$ 17.04. Out of a total of 547 patients, 12.43% had albinism, 18.65% CD, 17.73% SD, 35.65% AMD, and 15.54% RP. Within these patient groups, 57.35% with albinism, 54.90% with CD, 23.71% with SD, and 70.26% with AMD preferred using filters. The most frequently chosen filters (nm) were 540 (indoor, 53.8%), 540 (outdoor, 56.4%) in albinism; 480 (indoor, 30.4%), 600 (outdoor, 35.7%) in CD; 480 (indoor 47.8), 480 (52.2%) in SD; 450 (indoor, 99.3%), 450 (outdoor, 99.3%) in AMD; 540 (indoor, 44.0%), 540 (outdoor, 44.0%).

**CONCLUSIONS:** Filters are used to protect the eyes from damage from the sun, enhance contrast, and prevent photophobia, thereby improving vision. A significant portion of each disease group opted for using filters, thereby highlighting the importance of these devices. These findings will expedite the clinical assessment of patients who need filters.

**Keywords:** Optical Filters, Photophobia, Contrast Enhancement, Low Vision Rehabilitation



### **Congenital Palsy of Trochlear Nerve in Our Practice and Some Dilemmas in Treatment**

Orhan Kubati, Mirlinda Kubati-Ajeti, Shend Ajeti

**Introduction**: Its anatomical features make the Trochlear nerve vulnerable. Trochlear nerve palsy causes paralysis of m.Obliquus superior. It is manifested by vertical, torsional deviation and diplopia. The presence of Torticollis should be examined and the Bielschowsky maneuver should be performed. Indications for surgical treatment are: diplopia, abnormal head position, hyperopia in the primary position or lateral version and degradation of binocular vision.

**Material and Methods**: This paper is a presentation of 3 clinical cases aged 4 years (M), 5 years (F), and 18 years (M). Patients present with various symptoms and signs of congenital paralysis of the Trochlearis nerve. One of the cases (M – 18 years old) was referred forconsultation to the Ophthalmologist by the Orthopedist. In all three cases, clinical examinations were performed, with special emphasis on the examination of the presence of Torticollis, the Bielschowky maneuver, and the measurement of the deviation angle. Surgical intervention was recommended (the parents of two of the patients refused the intervention).

**Conclusions**: Congenital paralysis of the Trochlear nerve is detected late by the parents, but also by the family doctor and pediatrician. In our practice, we have found many cases with consequences. Early surgery is quite successful (strabismus and functional consequences improve). It is necessary for ophthalmologists of other subspecialties, family doctors and pediatricians to be informed about the latest developments in strabology, to enable the early diagnosis of oculo-motor and functional disorders. The earlier strabismus is diagnosed, the higher the success of the treatment.

**Key-words**: Trochlear nerve palsy, Torticollis, Bielschowsky maneuver, Surgical intervention.



# **FREE PAPERS-IV**

26 October 2024 13.30-15.00

## The effect of selective suture removal on post-penetrating keratoplasty astigmatism in keratoconus patients

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**BACKGROUND AND AIM:** Keratoplasty is a surgical procedure in which a diseased cornea is replaced with a donor cornea, either completely(penetrating) or partially(lamellar). The main indications for penetrating keratoplasty(PK) in keratoconus are high astigmatism and corneal scarring. Managing post-PK astigmatism is crucial, and suture manipulation is a key approach. In selective suture removal(SSR) tight sutures along steep corneal meridians are identified by topography and removed. This study aimed to assess SSR's impact on post-PK astigmatism in keratoconus patients.

**METHODS:** The study involved 28 consecutive PK procedures, each performed with 12 interrupted 10-0 nylon sutures. SSR was performed at 2 months post-operation to reduce astigmatism, identified using topography and refractometry. The tight sutures were located by topography. Refraction and topography were re-evaluated 4-6 weeks later. A paired-samples t-test was used to evaluate SSR's effect on reducing topographic and refractive astigmatism, independent of the axis.

**RESULTS:** The mean patient age was  $28.3 \pm 5.6$  years at the time of PK. Results showed a statistically significant reduction in both topographic and refractive astigmatism after SSR. Topographic astigmatism decreased from  $5.23\pm2.41$  D to  $3.67\pm1.34$  D(p=0.01) and refractive astigmatism decreased from  $3.45\pm2.65$  D to  $2.50\pm1.44$  D(p=0.03) following SSR. Snellen best corrected visual acuity(BCVA) increased from  $0.42\pm0.23$  to  $0.56\pm0.24$ (p=0.03). No complications, including infections, wound dehiscence or rejection were noted.

**CONCLUSIONS:** Astigmatism after PK is usually irregular and causes reduction of BCVA. SSR helps to reduce astigmatism and render it more regular. SSR's effectiveness on post-PK astigmatism has been documented in many studies. This study found SSR improved both refractive and topographic astigmatism and BCVA, which was consistent with existing research. Early selective suture removal after penetrating keratoplasty is associated with a favorable keratometry and refractive outcome.

**Keywords:** penetrating keratoplasty, keratoconus, post-keratoplasty astigmatism, selective suture removal, corneal topography

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**OP-52** 

### **Conjunctival Neoplasia**

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Conjunctival neoplasia refers to a spectrum of benign, premalignant, and malignant tumors arising from the conjunctiva, the membrane covering the sclera and inner eyelids. Although relatively uncommon, these lesions are clinically significant due to their potential to invade surrounding ocular structures, cause visual impairment, and, in some cases, metastasize. The most prevalent types include squamous cell carcinoma (SCC), conjunctival melanoma, and ocular surface squamous neoplasia (OSSN). Risk factors such as ultraviolet (UV) radiation, human papillomavirus (HPV) infection, and immunosuppression are strongly implicated in the pathogenesis of these neoplasms.

Diagnosis is typically based on clinical examination, aided by imaging techniques and confirmed by histopathological analysis following a biopsy. Treatment strategies vary depending on the type and stage of the neoplasm and may involve surgical excision, cryotherapy, topical chemotherapy (e.g., mitomycin C or interferon), or radiation therapy. Given the risk of recurrence and metastasis, especially with malignant lesions, long-term follow-up is essential.

Effective management of conjunctival neoplasia requires a multidisciplinary approach to optimize outcomes, preserving both the function and cosmetic appearance of the eye while minimizing the risk of disease progression.

**Keywords:** conjunctival neoplasia, squamous cell carcinoma, conjunctival melanoma, ocular surface squamous neoplasia, OSSN, UV radiation, HPV, biopsy, histopathology, surgical excision, cryotherapy, topical chemotherapy, eye tumors.



### Tear film stability and blink behavior interact with each other

Yakup Acet

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**BACKGROUND AND AIM:** The purpose of the presentation was to examine the relationships between blink dynamics obtained with the Non-Noticeable Blink Dynamics Method and Non-Invasive Tear Break-Up Time Test (NI-BUT) parameters.

**METHODS:** The Number of Blinks Per Minute (NoB), the Number of Complete Blinks Per Minute (NoCB), the Number of Incomplete Blinks Per Minute (NoICB), and 9 separate Interblink Interval (IBI) values in the 1-minute non-noticeable blink dynamics videos were examined for each participant. The average IBI value (A-IBI) was created for each participant from the 9 individual IBI values that were examined. Tear break-ups during the NI-BUT test were also analyzed. The relationships between participants' non-noticeable blink dynamics and NI-BUT parameters were examined.

**RESULTS:** The study was conducted with 50 female participants who were aged between 18-30 (mean 24.42  $\pm$  3.42 years). Mean NoB, NoCB, and NoICB (blinks/minute)  $\pm$  standard deviation (SD) values were found to be 22.54  $\pm$  13.98; 13.48  $\pm$  11.49, and 8.86  $\pm$  7.86, respectively. The 9 IBI values examined were different from each other at statistically significant levels (p = 0.004). A statistically significant and negative correlation (r= -0.927, p= 0.000) was detected between the A-IBI value and NoB. A statistically significant and positive correlation was detected between the A-IBI value and the tear break-up time values in the NI-BUT test, starting from the first tear break-up time value (p<0.05). A statistically significant and negative correlation was found between NoB and tear break-up time values in the NI-BUT test (p<0.05).

**CONCLUSIONS:** Interblink interval values varied between participants and in each participant's different blink circulations. As the number of blinks increased in the non-noticeable blink dynamics parameters, the tear break-up time value in the tears decreased. As the interblink interval value increased, the tear break-up time value in tears also increased. Tear film stability and blink behavior interact with each other.

**Keywords:** Blink, Non-invasive tear break-up time, Non-noticeable blink dynamics, Corneal topography, Tear film.

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**OP-54** 

### **EVALUATION OF VOGT PALISADES AND CONJUNCTIVA EPITHELIA WITH** OPTICAL COHERENCE TOMOGRAPHY (OCT) and IN-VIVO CONFOCAL MICROSCOPY (IVCM) IN THE POSTOPERATIVE PERIOD IN PATIENTS WHO **HAVE HAD PTERYGIUM SURGERY**

Damla Nur Dinc, Aysun Sanal Dogan

SBÜ Dışkapı Yıldırım Beyazıt Eğitim ve Araştırma Hastanesi, Göz Kliniği, Ankara

**BACKGROUND AND AIM:** To investigate the effect of pterygium surgery with autograft on the microanatomy of the limbal region using anterior segment optical coherence tomography (AS-OCT) and in-vivo confocal microscopy (IVCM).

**METHODS:** This single-center, retrospective study included 35 patients who underwent uncomplicated pterygium surgery with conjunctival-limbal autograft at least 6 months prior (Group C), 33 patients with pterygium (Group P), and 37 healthy controls (Group K). Exclusion criteria were ocular diseases, previous surgeries or trauma, recurrent pterygium, pregnancy, and breastfeeding. Pterygium degree was assessed and anterior segment photographs were taken. Limbal epithelial thickness and central corneal thickness (CCT) were measured in nasal and superior limbal regions using OCT. IVCM was used to examine the location of Vogt's palisades, epithelial basal cell counts, and stromal changes in the same areas.

**RESULTS:** In all groups, nasal limbal epithelial thickness was greater than superior, but differences were not statistically significant (pP = 0.442; pC = 0.964; pK = 0.509). Epithelial basal cell counts in Groups P and K were significantly higher than in Group C ( $P = 3021.91 \pm 631.15$ ,  $K = 3937.87 \pm 321.85$ ,  $C = 2401.47 \pm 502.20$ ; p<0.001). Group K had higher counts than Group P ( $K = 3937.87 \pm 321.85$ ,  $P = 3021.91 \pm 631.15$ ; p<0.001). Basal cell counts in the contralateral eyes of the pterygium (PK) and control (KK) groups were significantly higher than in the post-surgery contralateral eyes (CK) (PK =  $3040.69\pm549.61$ , KK =  $3802.17\pm129.92$ , CK =  $2377.03\pm518.43$ ; p<0.001). KK counts were higher than PK (KK =  $3802.17\pm129.92$ , PK =  $3040.69\pm549.61$ ; p<0.001).

**CONCLUSIONS:** Pterygium surgery impacts limbal microanatomy, with a significant reduction in basal cell density in the post-surgery group compared to controls. The lower basal cell counts in the pterygium group suggest a potential preclinical limbal stem cell deficiency. The lack of difference in epithelial thickness at Vogt's palisades may be due to OCT resolution limits.

**Keywords:** in-vivo confocal microscopy, anterior segment optical coherence tomography, pterygium, vogt palisades, limbus

# Tectonic and Therapeutic Penetrating Keratoplasty: Causes, Outcomes and Complications

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**BACKGROUND AND AIM:** To report the indications, clinical and visual outcomes and complications of tectonic (TC) and therapeutic (TH) penetrating keratoplasties (PK) performed in our center.

**METHODS:** Data of patients who underwent TC/TH PK since January 2018 were retrospectively analyzed. Maintaining globe integrity was defined as anatomical success. An increase in uncorrected visual acuity (UVA) was defined as functional success.

**RESULTS:** Fifty-one eyes (29 TC, 22 TH) were analyzed. The mean age was 56.8±17.3 years. The mean follow-up was 21.9±17.1 months. There were infectious perforation in 12, infectious desmatocele in 8, spontaneous desmatocele in 1, spontaneous perforation in 5, and traumatic perforation in 3 TC PKs. Of the TH PKs, 2 were herpetic, 12 were bacterial, 6 were fungal and 2 were parasitic. Of the infectious TC PKs, 6 were herpetic, 11 were bacterial, 2 were fungal, and 1 was parasitic. The mean graft diameter was 7.35±0.6 mm. The UVA prior to PK and at the last visit, were 2.3±0.3 and 0.06±0.1 logMAR respectively (p<0.001). Anatomical success was achieved in all eyes and functional success was achieved in 52.9% of eyes. There were 1 case of endophthalmitis and 8 cases of re-infection after PK. The duration of re-infection was 2.8±2.7 months. None of the eyes with herpetic etiology developed re-infection. Suture revision, membrane removal, and re-PK were performed in 8, 2, and 5 eyes, respectively. Graft survival during follow-up was 74.5% (Figure 1). The graft survival rate decreased as graft diameter increased (risk ratio=18.5, p=0.03). Infectious perforation had a negative impact on graft survival (risk ratio=28.2, p=0.02). There was no correlation between graft survival and infectious agent, patient age, and UVA at presentation (p>0.05).

**CONCLUSIONS:** PK is an effective option for keratitis that cannot be maintained with medical treatment and in eyes at risk of perforation or already perforated eyes. Graft diameter and the presence of infectious perforation should be considered for graft survival.

**Keywords:** Keratitis, tectonic penetrating keratoplasty, therapeutic penetrating keratoplasty

## **Cross-Linking Results According to Age in Pediatric Patients Undergoing Cross-Linking for Keratoconus**

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**BACKGROUND AND AIM:** To investigate the effect of age on postoperative values in pediatric patients undergoing cross-linking.

**METHODS:** Pediatric patients (18 years and younger) diagnosed with keratoconus who underwent Cross-linking between 2022 and 2024 were retrospectively analyzed. Cross-linking was performed in accelerated mode ((10 mW/cm2, 9 min) epi-off. Patient follow-up was performed with Sirius topography (Sirius; Costruzione Strumenti Oftalmici [CSO], Florence, Italy). Visual acuity, K1, K2, Kmax, thinnest corneal thickness, astigmatism, keratoconus screening values (BCV, Sifi Kvf), coma and spherical aberration values were recorded preoperatively, six months postoperatively and one year postoperatively.

**RESULTS:** 16 eyes of 16 patients were included in the study. The mean age of the patients was  $14 \pm 2$ . Seven of the patients were female and 9 were male. Preoperative K1, K2, Kmax, Kmax, Slf, kVf, BCV and coma aberrations were positively correlated with age, whereas postoperative values did not change significantly with age (p=0.04, r=0.5; p=0.04, r=0.50; p=0.01, r=0.60; p=0.50, r=0.50; p=0.01, r=0.60; p=0.01, r=0.60, p=0.02, r=0.60, respectively). In addition, There was a moderate positive correlation with age in 6th month postoperative Kmax, kVf and BCV values (p=0.007, r=0.67; p=0.015, r=0.61; p=0.015, r=0.597; p=0.022, r=0.58).

**CONCLUSIONS:** In pediatric keratoconus, there was an age-related increase in K1, K2, Kmax, Slf, kVf, BCV and coma aberrations when the patients first presented; whereas age affects postoperative 6. months Kmax, kVf and BCV values, as well.

**Keywords:** pediatric keratoconus, cross-linking, age

## Choroidal Changes in Keratoconus and Effects of Corneal Collagen Crosslinking Treatment

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**BACKGROUND AND AIM:** Keratoconus is known as noninflammatory corneal ectasia, but in recent years researchers have focused on the possibility that keratoconus may be an inflammatory disease. Choroidal thickness (CT) and choroidal vascularity index (CVI) have been shown to be biomarkers in inflammatory diseases. In this study, subfoveal CT and CVI of keratoconic eyes that underwent corneal collagen crosslinking (CXL) and those that did not were compared with each other and with healthy eyes.

**METHODS:** A total of 140 eyes were included in the study. This comprised 61 eyes of 61 keratoconus patients without systemic diseases or history of ocular surgeries other than CXL, 39 eyes of 39 keratoconus patients who received CXL, and 40 eyes of 40 healthy individuals. Various measurements and examinations were conducted; including refraction values, best-corrected visual acuities, corneal endothelial counts, intraocular pressures, anterior and posterior segment examinations. Additionally, corneal topography and EDI-OCT were performed. Keratoconic eyes were staged according to Belin ABCD and Amsler Krumeich systems. Subfoveal CT and CVI were calculated using Image J software .

**RESULTS:** Demographic and clinical characteristics of the case; 69 were female and 71 were male. In our study, subfoveal CT, total area (TA), stromal area (SA) and CVI measurements were statistically different between the groups (p<0.05). The median duration of CXL application was 31 months (ranging from 1 to 120 months). No significant difference was found in CT and CVI between keratoconic eyes that underwent CXL and those that did not (p>0.05). The results also indicated lower CVI in keratoconic eyes compared to the control group, while CT was higher (p<0.001) .

**CONCLUSIONS:** The study found that subfoveal CT increased in keratoconic eyes compared to healthy eyes, while CVI was only slightly affected. Furthermore, CXL treatment did not have a significant impact on subfoveal CT and CVI measurements.

**Keywords:** keratoconus, corneal collagen cross-linking, choroid, choroidal vascularity index

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**OP-58** 

#### Prognosis of Infectious Corneal Ulcers Treated with Antibiotics Empirically Without Culture Results

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**BACKGROUND AND AIM:** Diagnosis of infectious keratitis is mainly based on biomicroscopical examination. Culture of corneal scrapes is the preferred initial test to identify the culprit organism. The aim of this study is to evaluate visual prognosis of infectious keratitis patients treated with antibiotics empirically without culture of corneal scrapes

**METHODS:** Charts of patients hospitalized as infectious keratitis between 2021-2024 in a thirtiery eye hospital were reevaluated. Medical data from the charts, were recorded. As infectious keratitits was suspected, corneal specimen is taken and is sent to another hospital's microbiological laboratories. As usually the results of the culture reported too late for a fast progressing lesion, the treatment protocol is started ampirically based on the history and clinical examination.

**RESULTS:** Medical data of 27 eyes of 27 patients (15 female, 12 male) were included to the study. Mean age was, 52.66 ±24.10 (range 15-93) years. Visual acuity at admission to the hospital; 1.0±0.96 LogMar, the last visual acuity; 0.84± 0.78LogMar. One has contact lens wear, 11 eyes have chronic herpetic keratitis, 2 eyes have foreign body removed, 2 eyes have chronic blepharitis. Distribution of clinical diagnosis were as follows; fungal keratitis; 10 cases, herpetic and bacterial keratitis mixed; 5 cases, bacterial keratitis; 9 cases, acantomoeba ketatitis; one case, herpetic keratitis; 2 cases. Nine cases had an amniotic membrane transplantation in addition to medical treatment. Fortified sephalosporin, vancomycin anti-biotics were mainly used in treatment of 16 cases, combined with flukanozol, voriconasol or acylovir(po)

**CONCLUSIONS:** The most common organisms causing infectious keratitis are bacteria and herpes simplex virus. However slow cycling microorganisms (Nocardia, Acantomoeaba, fungi) should be ruled out to make an accurate diagnosis. While confirming response to the predicted antibiotic regimen, patient should be followed carefully with frequent biomicroscopic examination.

**Keywords:** keratitis, empirically, infectious, fungal

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**OP-59** 

#### **Evaluation of glaucoma outcomes after penetrating and lamellar** keratoplasty

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**BACKGROUND AND AIM:** To compare visual outcomes, intraocular pressure (IOP), antiglaucomatous medication usage, corneal graft survival and complications after trabeculectomy (TRAB) and Ahmed Glaucoma Valve (AGV) implantation in patients who had previously undergone keratoplasty (KP).

METHODS: We review KP results from January 2005 to January 2019 in the Department of Ophthalmology, Akdeniz University Faculty of Medicine.

**RESULTS:** Of the 627 penetrating keratoplasty (PKP), 173 deep anterior lamellar keratoplasty (DALK) and 810 patients who underwent surgery, 180 (22.2%) developed postoperative glaucoma (21 had preoperative glaucoma). Of these patients, 152 developed glaucoma after PKP (24.2%) and 28 developed glaucoma after DALK (4.6%). Graft rejection occurred in 28 patients (1 after DALK, 27 after PKP). In 125 of 180 patients with glaucoma, IOP was controlled with medical treatment. AGV implantation was performed in 20 patients (18 PKP, 2 DALK), trabeculectomy in 35 patients (27 PKP, 8 DALK), and AGV implantation after trabeculectomy in 4 patients. Graft failure was observed in 9 (45%) patients in the AGV group, while graft failure was observed in 5 (17.2%) patients in the trabeculectomy group (p: 0.0497). The highest rate of glaucoma was in patients who underwent KP due to corneal infection, dystrophy, and edema (p: 0.001).

**CONCLUSIONS**: Close monitoring of patients for glaucoma is important after keratoplasty. We observed that long-term topical steroid use, penetrating technique and pseudophakia increased the incidence of glaucoma and that the incidence of glaucoma was higher in the PKP group.

**Keywords:** DALK, PKP, TRAB, AGV

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#### **OP-60**

## Analysis of Corneal Mapping and Ocular Surface Parameters with Anterior Segment Optical Coherence Tomography in Newly Diagnosed Severe Obstructive Sleep Apnea Syndrome Patients

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**BACKGROUND AND AIM:** We aimed to compare corneal thickness maps and ocular surface parameters with anterior segment optical coherence tomography(OCT) between newly diagnosed severe Obstructive Sleep Apnea Syndrome(OSAS) patients and healthy controls.

**METHODS:** Thirty patients between the ages of 27-67 years with severe OSAS and 30 healthy subjects of similar age were included in the study. Ocular surface parameters (Schirmer, Break up-time(BUT)), Oxford corneal staining score, Ocular Surface Disease Index(OSDI) score were evaluated in all participants and corneal thickness maps were obtained by anterior segment OCT.

**RESULTS:** The mean ages of the control and patient groups were 44.80±6.5 and 48.3±8.9 years, respectively (p: 0.09). The mean Apnea hypopnea index (AHI) in the patient group was 64.53±21.25, mean body mass index (BMI) was 31.33±3.66. BUT, Schirmer tests, Oxford corneal staining score and OSDI score were statistically significantly different between the groups (p: <0.001, p: 0.037, p: 0.001, p: 0.001, respectively). There was no significant difference between the groups in the parameters(minimum, maximum, central, superonasal-inferotemporal, superior-inferior, superotemporal-inferonasal, temporal-nasal) in the corneal thickness(epithel and total) map using OCT.

**CONCLUSIONS:** Ocular surface parameters may worsen in OSAS. Corneal thickness mapping with OCT can be used in ocular surface evaluation, but no significant difference may have been found in our study because newly diagnosed OSAS patients were evaluated.

**Keywords:** apnea, cornea, dry eye, mapping, sleep

**OP-61** 

## Importance of Clinical and AS-OCT Features of Descemet Membrane Detachment After Cataract Surgery

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**BACKGROUND AND AIM:** We aimed to evaluate the clinical features like as; predisposing factors, intervention times and also anterior segment optic coherence tomographic (AS-OCT) features like as; morphometric parameters and classifications of descemet membrane detachment (DMD)s that underwent surgical intervention.

**METHODS:** This is an observational retrospective study included 100 eyes of 100 patients with clinically significant DMD which required surgical intervention who underwent cataract surgery from 2018 to 2023. Patients were divided into three groups according to detection and intervention times as: peroperative detection and single surgery group (n=80), peroperative detection and repeated surgery group (n=9) and postoperative detection group (n=11).

**RESULTS:** Of the 89 patients diagnosed peroperatively, Predisposing factor for DMD was detected in 22 patients. Of the 89 patients who treated with air desmethopexy diagnosed peroperatively, 80 (89.8%) were treated during cataract surgery and did not need any other intervention (peroperative detection and single surgery group), while 9 (10.1%) required additional intervention during postoperative follow-up (peroperative detection and repeated surgery group). The mean of DMD height and lenght parameters were not shown statistically significant difference between groups (p=0.056, p=0.824, respectively), The mean CCT was statistically significant between groups (p<0.001). There was a statistically significant difference between the groups in terms of the presence of predisposing factors (p=0.003). The effect of the presence of predisposing factors on DMD height (P=0.631), lenght (P=0.579) and CCT (0.796) were not shown statistical difference.

**CONCLUSIONS:** Early surgical intervention for deteachment is very important for success. Predisposing factor positivity is very important parameter need requirement repeated surgery.

**Keywords:** Descement membrane detachment, Anterior segment optic cohorens tomography, Phacoemulsification.



## **POSTER PRESENTATIONS**

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**PP-02** 

#### Effect of Intravitreal Anti-VEGF Injection Therapy on Intraocular Pressure in the Acute Period

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**BACKGROUND AND AIM:** The aim of this study was to investigate the effect of intravitreal anti-VEGF injection (IVE) on intraocular pressure (IOP) in the acute period in the treatment of diabetic macular edema (DME) and age-related macular degeneration (AMD).

**METHODS:** The study included 34 eyes of 34 patients without glaucoma who had intravitreal 0.05 ml (0.5 mg) bevacizumab injection in our clinic due to DME and AMD between January 2024 and March 2024. The IOP values measured just before IVE were compared with the IOP values measured on the 1st day after IVE. The measurements were compared according to diagnostic groups and age groups using the Paired-t test.

**RESULTS:** A total of 34 eyes (18 right, 16 left) of 34 patients (20 female, 14 male) were included in the study. The mean age was 64.59±8.83 (47-80). While the mean IOP measurement before IVE was 17.82±3.35 (11-26) mmHg, the mean IOP measurement on the first day after IVE was 17.24±3.56 (12-28) mmHg (Figure 1). IVE was performed in 21 of the cases with the diagnosis of DME and 13 with AMD. When the IOP of DME and AMD cases was compared on the 1st day after IVE according to the diagnostic groups, no statistically significant difference was found (p>0.05, Figure 2). The cases were examined in three groups according to their age ranges as 50-59 years (8 cases), 60-69 years (15 cases), 70-80 years (10 cases). Since there was one patient in the 40-49 age group, this age group was not included in the analysis. When the IOP before IVE was compared with the IOP on the 1st day after IVE according to the age groups, no statistically significant difference was found (p>0.05, Figure 3).

**CONCLUSIONS:** In our study, cases treated with intravitreal bevacizumab injection due to DME and AMD, pre-IVE IOP and 1st day post-IVE IOP were compared according to age and diagnosis groups and no significant difference was found in the change in IOP in the acute period.

**Keywords:** acute, age-related macular degeneration, diabetic macular edema, intraocular pressure, intravitreal anti-VEGF injection

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**PP-03** 

## Effect of intra-articular steroid injection for osteoarthritis on intraocular pressure

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**BACKGROUND AND AIM:** Although intra-articular steroid injections are generally considered safe, they can rarely elevate intraocular pressure (IOP). This study aims to determine early effects of intra-articular triamcinolone hexacetonide injection on IOP.

**METHODS:** Sixty eyes of 30 patients who were followed up in the orthopedic clinic due to degenerative joint disease (osteoarthritis) of the knee were included in the study. None of the patients had a history of glaucoma. All intra-articular knee injections were performed using the superior parapatellar approach. Patients were injected 40 mg triamcinolone hexacetonide in only one knee. Intraocular pressure measurements were performed with Goldmann applanation tonometry before and one week after intra-articular steroid injection treatment.

**RESULTS:** The mean age was  $58.10 \pm 9.39$  years (range, 54-75 years). There were 17 (56.67%) women and 13 (43.33%) men. The mean IOP values before intra-articular steroid injection in the right and left eyes were  $14.77\pm3.05$  mmHg and  $14.66\pm3.06$  mmHg, also one week after the intra-articular injection were  $14.55\pm2.76$  mmHg and  $14.48\pm2.67$  mmHg, respectively. No statistically significant changes were observed in IOP values in both eyes one week after intra-articular injection (p = 0.537 and p = 0.617). Moreover, The IOP did not exceed 21 mmHg in any of the patients during follow-ups.

**CONCLUSIONS:** Intra-articular triamcinolone hexacetonide injection into the knee does not increase IOP in early period. However, further studies with larger number of sample size are needed to determine the long term effects of intra-articular steroid injection on IOP.

**Keywords:** Intraocular pressure, intra-articular injection, triamcinolone, osteoarthritis

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**PP-04** 

#### Is There a Relationship Between Soft Toric Contact Lens Rotation and **Fundus Torsion?**

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**BACKGROUND AND AIM:** We aimed to investigate the potential correlation between soft toric contact lens rotation and fundus torsion.

**METHODS:** Retrospective data from 8 patients (15 eyes) fitted with one type of soft toric contact lens (Senofilcon A). Patient files were reviewed for age, demographic data, type of soft toric contact lenses, and orthoptic exams. Fundus photos were analyzed for torsion by ImageJ software. The disc-foveal angle was calculated for fundus torsion. Disc-foveal angle was defined as the angle formed between a line passing through the center of the optic disc to the fovea and another horizontal line passing through the center of the optic disc, using fundus photographs (Figue 1). An assessment of soft toric contact lens rotation fitting parameters was conducted, with rotation degrees documented for analysis.

**RESULTS:** Eight cases were included in the study, including three girls, aged 16-29 years. All cases were orthophoric. Figure 2 presents a comprehensive overview of the demographic and clinical parameters observed in the study participants. A Spearman correlation analysis was performed to assess the association between soft toric contact lens rotation and fundus torsion. The findings revealed no statistically significant correlation between these two parameters (r=-0.270, p=0.329).

**CONCLUSIONS:** Clinical examinations often fail to adequately diagnose fundus torsion. However, the utilization of readily available fundus photography can significantly enhance its detection. Our research indicates that there is no discernible correlation between the rotation of soft toric contact lenses and fundus torsion.

**Keywords:** Fundus torsion, Image J, Soft toric contact lens rotation



## **Evaluation of Corneal Endothelial Cell Density and Morphology in High Refractive Error Patients Using Specular Microscopy**

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**BACKGROUND AND AIM:** High refractive errors, such as myopia and hyperopia, can lead to significant changes in corneal structure, particularly in the endothelial cell layer. These alterations are critical when planning refractive surgery. This study aims to evaluate the impact of high refractive errors on corneal endothelial cell density (ECD) and morphology using specular microscopy.

**METHODS:** This retrospective study included patients with high refractive errors (both myopia and hyperopia). Endothelial cell density and morphological parameters, including pleomorphism and polymegathism, were assessed using a NIDEK specular microscope. The results were statistically analyzed and compared between different refractive error groups.

**RESULTS:** The average ECD in high myopic patients was 2531 cells/mm<sup>2</sup>, significantly lower than in low myopic patients (2992 cells/mm<sup>2</sup>, p<0.001). The coefficient of variation (CV) was higher in high myopia patients (18.5%) compared to low myopia patients (35%). Similar trends were observed in hyperopic patients, with reduced ECD and increased pleomorphism. Corneal thickness (CCT) was also found to be thinner in high refractive error patients.

**CONCLUSIONS:** High refractive errors, particularly myopia, are associated with a decrease in corneal endothelial cell density and an increase in morphological irregularities. These findings suggest the importance of thorough endothelial assessment before refractive surgery. Further research is necessary to explore the long-term effects of these changes on surgical outcomes.

**Keywords:** High Myopia, Hyperopia, Corneal Endothelial Cells, Specular Microscopy, Polymorphism, Polymegathism

#### **Toxic Keratopathy Due to Topical Medications After Cataract Surgery**

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**BACKGROUND AND AIM:** To share the image of toxic keratopathy resulting from eye drops containing benzalkonium chloride (BAK) and purite; and the improvement of the ocular surface after discontinuing these drops and administering 20% autologous serum treatment.

**METHODS:** A 61-year-old female patient's left eye was examined 2 weeks after uncomplicated phacoemulsification surgery. Her visual acuity was measured at 1.3 LogMAR and her intraocular pressure was 13 mmHg. Upon examination with a biomicroscope, dense epithelial edema and punctate epitheliopathy in the cornea were observed (refer to Figure 1). The patient was using 0.5% moxifloxacin eye drops five times a day, 5mg/5ml dexamethasone eye drops (containing BAK) five times a day, and 4mg/ml polyethylene glycol, 3mg/ml propylene glycol artificial tears (containing purite) five times a day. All drops were discontinued, and 20% autologous serum was administered five times a day.

**RESULTS:** One week after beginning treatment with autologous serum, the patient's visual acuity improved to 0.7 LogMAR. The epithelial edema and staining had decreased (Figure 2). At the one-month follow-up after starting autologous serum, the visual acuity was 0.2 LogMAR. The epithelial edema had regressed, and there was minimal staining (Figure 3).

**CONCLUSIONS:** When encountering postoperative ocular surface disorder, it's important to consider that preservatives in eye drops may be the cause, and treatment should be tailored accordingly.

**Keywords:** keratopathy, benzalkonium chloride, corneal toxicity

Epithelial edema and punctate staining were observed 2 weeks after the operation.

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**PP-10** 

## Evaluation of the Efficacy of 3% Trehalose and 0.15% Sodium Hyaluronate Drops in Patients with latrogenic Dry Eye Following Eyelid Surgery

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**BACKGROUND AND AIM:** This study aims to compare the efficacy of a combination of 3% trehalose and 0.15% sodium hyaluronate with preservative-free 0.15% sodium hyaluronate in treating iatrogenic dry eye following eyelid surgery.

**METHODS:** Our study included 57 patients who underwent surgery for eyelid disorders (entropion, ectropion, trauma, malignancy). Preoperative measurements of BUT (tear break-up time), OSDI (ocular surface disease index) score, Oxford staining score, meibography, central epithelial thickness, and non-invasive BUT data were recorded. The first group (Sh) consisting of 29 patients received postoperative 0.15% sodium hyaluronate, while the second group (Td) of 28 patients received a combination of 3% trehalose and 0.15% sodium hyaluronate. Patients were followed up for three months and their measurements were repeated.

**RESULTS:** Measurements at baseline showed that the groups were statistically similar (p>0.05) while post-treatment 3rd months data revealed a decrease in dry eye symptoms and signs in both groups. However, patients in the second group (Td) showed better results in terms of increased BUT, decreased OSDI score, and reduced Oxford staining (p<0.05).

**CONCLUSIONS:** Eyelids are directly related to tear stability and quality due to their role in reducing evaporation and contributing to the lipid layer of the tear film. Postoperative dry eye symptoms can increase due to factors such as topical anesthetics drops used in eyelid surgery, postoperative topical medications or lagophthalmos. Trehalose-containing eye drops, unlike many other dry eye drops, have proven to have high efficiency in maintaining normal cellular morphology and in preventing desiccation-induced cell death In our study we found that the combination of 3% trehalose and 0.15% sodium hyaluronate was more effective than preservative-free 0.15% sodium hyaluronate alone in treating iatrogenic dry eye.

**Keywords:** eyelid surgery, iatrogenic dry eye, trehalose

#### **Investigating Sleep Disorders in Children with Leber Congenital Amaurosis**

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**BACKGROUND AND AIM:** Leber congenital amaurosis (LCA) is a severe inherited retinal dystrophy which accounts for 20% of childhood blindness. The circadian rhythm is dependent on visual input of light, therefore diseases that lead to blindness may also cause sleep disturbance. Our purpose is to investigate whether these patients experience sleep disturbances.

**METHODS:** Parents of 33 cases under 18 years old being monitored for LCA were asked to respond to the Sleep Disturbance Severity Scale (SDSC) sent to them online. 28 cerebral visual impairment (CVI) cases were included as a control group. Since visual acuity could not be standardly assessed in both patient groups, vision scores were used based on their ability to track light and objects. The relationship between the total and subscale SDSC scores and the patients' vision scores, as well as the difference in scores between both groups, were statistically compared.

**RESULTS:** The LCA and CVI groups were matched by gender, with mean ages of 8.45  $\pm$ 4.17 and 4.39  $\pm$ 2.60 respectively. The mean vision scores for LCA and CVI were 2.52  $\pm$ 1.34 and 2.88  $\pm$ 1.21, respectively. Over 80% of both patient groups scored above normal values on the total SDSC score. No correlation was found between the total and subscale scores and the vision score (p > 0.05), and no significant difference was found between the LCA and CVI groups in terms of total and subscale scores (p > 0.05). There was a statistically near-significant weak negative correlation only between the Sleep Breathing Disorders subscale score and the vision score (p = 0.052, r = -0.279).

**CONCLUSIONS:** With respect to the importance of melatonin synthesis and circadian rhythm and their relationship with visual input, healthcare providers should keep in mind the possibility of sleep disturbance in these patient groups.

**Keywords:** Leber Congenital Amaurosis, Sleep Disorder, Low Vision, Sleep Disturbance Scale for Children

Percentage of Sleep Disturbance Among LCA and CVI Patients

## 2nd Balkan Ophthalmology Meeting in conjunction with th KAO

4th KAO
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**PP-18** 

#### Unusual presentation of paclitaxel maculopathy in a patient with breast cancer

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**BACKGROUND AND AIM:** Paclitaxel (PTX)is an anti-tubule agent that inhibits mitotic activity used in the treatment of breast, ovarian, head and neck cancer. In addition to anterior segment complications such as chemosis, corneal epitheliopathy and edema, PTX-related retinopathy has rarely been reported.

**METHODS:** A 47 year old woman with 2 months of decreased vision was evaluated with a detailed ophthalmologic examination and ophthalmologic imaging.

**RESULTS:** A 47-year-old woman with no previous ocular problems who received 6 cycles of PTX chemotherapy for breast cancer presented to the outpatient clinic with blurred vision in both eyes.Best corrected visual acuities were 0.6 and 0.7 with Snellen's chart,intraocular pressure was 14 on the right and 15mmHg on the left,anterior segment examination was normal.Dilated fundus examination revealed vital optic discs and bilateral retinal pigment epithelial changes in the macula.Optical coherence tomography (OCT) demonstrated loss of ellipsoid layer in both eyes and intraretinal hyperreflective material accumulation in the right eye.Fundus autofluorescence imaging showed hyper-autofluorescence in the macula in the right eye but no significant findings in the left eye.No choroidal neovascular membrane was detected on OCT-angiography.PTX-induced retinal toxicity was considered and a consultation was written to the oncologist for alternative treatment.

**CONCLUSIONS:** Although the exact mechanism of PTX maculopathy remains unclear, it is thought to be a result of intracellular fluid accumulation caused by Muller cell dysfunction. PTX macular toxicity is known to cause cystoid macular edema without leakage on fundus angiography. Although the incidence of ophthalmic side effects associated with taxanes is approximately 1%, it is important for ophthalmologists and oncologists to recognize these side effects and various presentations for optimal management. Early detection of possible side effects through regular ophthalmic examinations and OCT scanning may help in the management of complications.

**Keywords:** Breast cancer, Paklitaxel retinopathy, Paklitaxel, Toksik maculopathy

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**PP-19** 

## The Role of Drusen in Altering Retinal Sensitivity in Age-Related Macular Degeneration

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**BACKGROUND AND AIM:** To investigate the effect of drusen on macular sensitivity in patients diagnosed with early and intermediate age-related macular degeneration (AMD).

**METHODS:** Patients with a diagnosis of early or intermediate AMD in at least one eye were included. The findings in the other eye, best-corrected visual acuity (ETDRS), drusen type, drusen volume (central and total), and total reticular drusen area were recorded along with microperimetric parameters, including mean threshold value, fixation stability, and macular integrity values, and changes in retinal sensitivity.

**RESULTS:** 55 patients were included in the study. The mean age was  $73.07 \pm 6.70$  years (range 59-88), with no significant difference in terms of age and gender. Microperimetry of eyes with drusen revealed a mean threshold value of  $15.82 \pm 8.01$  dB; 6 patients (8.6%) were classified as suspicious, and 49 (70.0%) were as abnormal. The fixation stability P1 value was  $42.92 \pm 27.28$ , and P2 was  $69.12 \pm 24.46$ ; 22 patients (31.4%) were classified as stable, 20 (28.6%) as relatively unstable, and 13 (18.6%) as unstable. The mean macular integrity value was  $54.36 \pm 26.47$ ; 11 patients (15.7%) were classified as normal, 25 (35.7%) as suspicious, and 19 (27.1%) as abnormal. Regarding drusen type, 20 patients (28.6%) had only soft drusen, 20 (28.6%) only hard drusen, and 15 (21.4%) only reticular drusen, while 31 (44.3%) had reticular drusen along with other types of drusen. The drusen volume was  $0.02 \pm 0.01$  mm<sup>3</sup> in the central 1 mm area, while the mean total reticular drusen area was  $0.70 \pm 0.45$  mm<sup>2</sup> in those with reticular drusen. No statistically significant correlation was found between total and central drusen volume, the presence and area of reticular drusen, and microperimetric values.

**CONCLUSIONS:** In patients diagnosed with early and intermediate AMD, it was observed that drusen negatively affected retinal sensitivity in terms of microperimetric parameters, namely mean threshold value, fixation stability, and macular integrity.

**Keywords:** Drusen, microperimetry, retinal sensitivity





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**PP-20** 

## Unusual Presentation Of An Klebsiella Pneumonia Endophtalmitis After Invasive Coronary Angiography

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**BACKGROUND AND AIM:** Endogenous endophthalmitis is a rare but severe intraocular infection, often caused by hematogenous spread from a distant systemic infection. Klebsiella pneumoniae, a highly virulent Gram-negative bacterium, can cause devastating ocular infections including endophthalmitis. Awareness and prompt treatment are crucial to preserving vision and improving outcomes.

**METHODS:** A 75-year-old female with a medical history of diabetes mellitus and hypertension presented with sudden vision loss in her right eye. Six days prior, she underwent coronary angiography and stent placement for acute coronary syndrome. Acute vision loss in her right eye developed post-procedure while in the ICU, prompting a referral to our clinic.Upon presentation, the patient was immobile and examined on a stretcher. Visual acuity in both eyes was no light perception.The right eye's anterior segment showed a hypopyon-filled chamber with elevated intraocular pressure.B-scan USG revealed retinal detachment, condensed vitreous, and increased choroidal thickness.(Figure 1)

**RESULTS:** Vitreoretinal surgery was performed, and samples were sent for microbiological analysis. Post-operative results confirmed Klebsiella pneumoniae, sensitive only to meropenem. Despite intravenous meropenem therapy, the condition worsened with recurrent hypopyon and severe ocular pain (Figure 2). A non-contrast CT scan indicated panophthalmitis, leading to a recommendation for evisceration, which the patient and her family refused. On the fifth day of hospitalization, urine culture grew ESBL-positive Klebsiella pneumoniae sensitive to meropenem.

**CONCLUSIONS:** This case highlights the importance of multidisciplinary care and awareness of systemic conditions contributing to ocular infections. Endogenous endophthalmitis remains a vision-threatening condition requiring prompt and aggressive management. Despite appropriate antibiotic therapy, patient education on the risks and benefits of surgical intervention is crucial for optimizing outcomes.

**Keywords:** endogen endophthalmitis, klebsiella pneumoniae, vitreoretinal surgery, coronary angiography

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**PP-21** 

25 - 26 October, 2024

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## Diagnosis and Treatment of Pediatric Vogt-Koyanagi-Harada Syndrome; Case Report

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**BACKGROUND AND AIM:** Vogt-Koyanagi-Harada syndrome is a granulomatous panuveitis characterized by the coexistence of systemic and ocular findings. It is rarely seen in children, but if not treated early, it is reported to have an unfavorable prognosis. This case report presents the diagnosis, clinical course, and treatment approach of a 7-year-old VKH patient who presented with blurred vision and had no accompanying systemic complaints prior or concurrently.

#### **METHODS:**

**RESULTS:** A 7-year-old male patient presented to our clinic with a complaint of blurred vision for one week. The best-corrected visual acuity measured with the Snellen chart was bilateral 0.1. The anterior segment examination revealed bilateral granulomatous keratic precipitates and +3 cells. Fundoscopic examination showed bilateral grade 2 vitritis and serous retinal detachment affecting the periphery. OCT findings revealed hyperreflectivity in the bilateral external nuclear layer, serous retinal detachment, undulation in the retinal pigment epithelium, and increased choroidal thickness. In FFA, early stages showed bilateral hypofluorescent spots, and late stages showed local leakage foci and leakage at the optic disc head. The patient was started on systemic prednisolone treatment with an incomplete VKH diagnosis. By the third week of treatment, the signs of anterior uveitis had completely regressed, and while minimal vitritis and subretinal fluid were present, adalimumab therapy was initiated with a loading dose followed by biweekly doses. Prednisolone was tapered and eventually discontinued, and at the last follow-up, it was noted that the visual acuity had returned to normal and the signs of uveitis had completely regressed.

**CONCLUSIONS:** Due to the severe course of VKH syndrome, early diagnosis and effective treatment in the pediatric age group are extremely important. As observed in our case, starting the anti-TNF agent adalimumab early appears to be effective in preventing recurrences and the development of systemic chronic findings in the short term.

**Keywords:** Vogt-Koyanagi-Harada Syndrome, granulamatous, panuveitis, serous retinal detachment, choroid

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**PP-22** 

#### ANTI-VEGF TREATMENT MODALITIES - CURRENT AND FUTURE PERSPECTIVES

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Anti-VEGF treatment refers to the group of drugs that are used in the treatment of retinal macular diseases, such as: diabetic retinopathy (DR) and diabetic macular edema (DME), wet form of age-related macular degeneration (wet AMD), retinal vein occlusions (RVOs), myopic macular degeneration and other retinal neovascular diseases or conditions.

Mostly, anti-VEGF today is the first-line treatment for DME, wet AMD and RVOs.

The treatment of those diseases over the years has evolved from retinal laser photocoagulation as a treatment of choice, to the different anti-VEGF drugs applied in the vitreous cavity of the patients. The main goal of the treatment is the inhibition of Vascular Endothelial Growth Factor (VEGF) by their binding affinity; hence, VEGF is the key mediator of inflammation and angiogenesis, leading to vision threatening complications.

The diagnosis of the diseases, timing of the treatment and its efficacy (anatomical and morphological features and parameters) is evaluated through optical coherence tomography (OCT) and optical coherence tomography angiography (OCT-A) as standard diagnostic methods for retinal and macular assessment.

At present, on the market are available a number of drugs, starting with Bevacizumab (Avastin), used "off label", Ranibizumab (Lucentis), Aflibercept (Eylea) and newer generations represented by Faricimab (Vabysmo) and Brolucizumab (Beovu).

Nevertheless which type of drug is applied, the chronic therapy with intravitreal injections leads to treatment burden over the patients, clinicians and hospitals. Therefore, we are witnessing continued pursuit for other treatment modalities that would enable maintenance of good anatomical and functional outcomes with less injections and longer treatment intervals. Achieving such criteria will substantially improve the quality of life of these individuals. Those novel treatment options will be presented in the lecture.

**Keywords:** anti-VEGF treatment, macular diseases, VEGF, optical coherence tomography



#### **Complex surgical treatment of Blepharophymosis syndrome (BPES)**

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**Purpose:** to present blepharophymosis–ptosis-epicantus inversus-telecantus syndrome and its treatment options. BFES is an autosomal dominant condition linked to FOXL2gene, approximately 50 % are sporadic.

**Methods:** retrospective case series of patients with BPES who underwent surgery at our hospital. Correction consists of correction of canthi and correction of ptosis. Traditionally it involves multiple steps; first medial canthoplasty to address blepharophimosis, epicanthus inversus and telecanthus in children of age 3 to 5 years, followed by correction of ptosis after approximately 1 year mostly by frontalis suspension or resection of LPS, Surgical treatment of blepharophimosis is very complex due to changed histological and anatomical properties of the orbit and its contents, we perform the treatment **on case per case basis** We have had very good results using Y-V technique for medial canthal correction and subtotal levator resection for correction of ptosis with removal of the fibrous plate whenever possible.

**Results:** We observed good cosmetic and functional results in all of our patients as evidenced by measurement of pre- and postoperative vertical intrapalpebral fissure height and MRD. Using levator resection we obtained better aesthetic outcome with more natural appearance compared to traditional frontalis suspension due to preserved palpebral fold. No intraoperative or postoperative complications were recorded. In some cases we noticed undercorrection of ptosis and scarring of medial canthus, which resolved by time.

**Conclusions:** Each patient with **b**lepharophymosis syndrome should be approached individually as the expression of syndrome and hence patients' symptoms are variable. From our experience we prefer to use multi-step approach. Whenever possible we prefer to use levator resection for the correction of ptosis since it provides superior aesthetic and functional results.