ASO & TROS Joint International Symposium

XIV th Conference of Young Ophthalmologists

14-15 October 2022
Baku, Azerbaijan

COMPILATIONS OF ABSTRACTS

AOC və TCOD birgə Beynəlxalq Simpoziumunun və 14-cü Gənc Oftalmoloqlar Konfransının TEZİSLƏR TOPLUSU

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Organizing Committee of the ASO & TROS Joint International Symposium and the 14th Conference of Young Ophthalmologists

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THE MORBIDITY RATE OF EYE PATHOLOGIES IN CHILDREN POPULATION OF GANJA-GAZAKH ECONOMIC REGION OF AZERBAIJAN

Abdıyeva Y.J.
National Centre of Ophthalmology named after acad. Zarifa Alieva, Baku, Azerbaijan

Introduction

Assessment of the incidence and prevalence rate in all areas of clinical need, including ophthalmology, allows to determine the volume of population's demand for treatment and prevention measures, risk factors, expected probability of pathologies.

Purpose – to assess the morbidity rate of eye pathologies in children population of Ganja-Gazakh economic region of Azerbaijan

Materials and methods

Official reports determined by the Ministry of Health of the Republic of Azerbaijan (No. 12 - diseases registered in the territory of the medical institution), electronic versions of statistical collections posted on the official website of the State Statistics Committee of the Republic of Azerbaijan have been used as research materials for studying general features of eye diseases in Ganja-Gazakh economic region.

Statistical methods of quality indicators were used for the statistical processing of collected materials.

Results

According to the application materials the third place among the pathologies of the eye and its accessory apparatus in children and adolescents is occupied by eye traumas (code S05). The specific share of eye traumas was between 9.4% and 16.3%, the lowest level was registered in Ganja city, the highest level – in Naftalan town.

Conclusion

Thus, districts of GGER can by classified due to eye traumas as following:

- Districts with very low rate of eye trauma (Gedebey);
- Districts with low rate of eye trauma (Goranboy and Samukh);

- Districts with moderate level of eye trauma (Gazakh, Agstafa, Tovuz, Shemkir and Goygol);
- Districts with high level of eye trauma (Ganja city and Naftalan town).
- The frequency of incidences of visual disorders according to the application materials may be the basis for grouping administrative territorial units in GGER:
- Districts with relatively low level of visual disorders (≤3.0±0.3‰): Tovuz, Samukh, Goranboy, Gedebey, Agstafa and Goygol;
- Districts and cities with relatively high level of visual disorders (>4.0±0.6‰): Ganja city and Dashkesen district;
- Districts with relatively moderate level of visual disorders (3.1±0.2 – 9.6±0.4‰): Gazakh, Shemkir, Naftalan.

TREATMENT OF RECURRENT CORNEAL EROSION SYNDROME WITH AUTOLOGOUS SERUM EYE DROPS

Dr. Nilay Akagun
Liv Hospital Bestekar st. No:8 Ankara, Turkey
E-mail: nildnd@yahoo.com

Recurrent corneal erosion syndrome (RCES) is an ocular disorder characterized by inadequate epithelial basement membrane adhesions, resulting in repeat episodes of corneal epithelial defects. These episodes are typically acute and may involve symptoms ranging from mild irritation to severe pain. RCES is commonly associated with prior corneal trauma, underlying corneal disease or both.

Diagnosis is based on clinical signs and patient history, Patients will typically describe symptoms that occur during sleep or upon awakening and include redness, photophobia and tearing. Corneal signs may range from punctate keratitis to a full-thickness epithelial defect.

The corneal epithelium is anchored to the basement membrane and Bowman's layer by specialized adhesion complexes. Trauma and corneal dystrophies can disrupt the adhesion complexes, which predisposes

the epithelium to form reccurent erosions. The exact mechanism of the epithelial healing failure is still not fully clear but epithelial basal membrane dystrophies, meibomial dysfunction, underlying systemic diseases are mostly blamed.

Treatment methods for RCE aim to facilitate rapid corneal re-epithelialization and prevent future occurrences of erosion. Medical therapy typically starts with preservative free eye drops to protect the ocular surface and accelerate epithelial healing. Topical prophylactic antibiotics should be used to decrease the risk of microbial keratitis. Lubricant ointments may be used at bedtime to provide a barrier on ocular surface and provide ovular comfort. Bandage contact lenses should be considered in large epithelial defects and reccurent erosions. In the existence of mebimomian dysfunction systemic tetracycline derivates can be added to therapy. After treatment of acute episodes, some patients will continue to have minor and major RCE occurrences. Surgical therapy may be necessary for resistant cases,

Surgical interventions include epithelial debridement, anterior stromal puncture, phototherapeutic keratectomy and amniotic membrane transplantation procedure. Recurrent erosions still occur in some patients who underwent surgical therapies.

Recently the use of autologous serum eye drops became a popular treatment choice in corneal epithelial defects and preventing recurrence episodes. The autologous serum drop and tear content are very similar. Epithelial growth factor (EGF), transforming growth factor (TGF) -beta and vitamin E have an accelerating effect on epithelialization. On the other way, Ig G and lysozyme have antibacterial effects. These cytokines are only found in blood-derivated eye drops. The healthy corneal epithelium layer after treatment with autologous serum drops is more scaffolding and resistant to formation of reccurent erosions .

The autologous serum drops should be considered seriously in RCES treatment due to rapid and strong epithelial healing resulting in decrease of recurrent epithelial defects.

ROP SCREENING, DIAGNOSIS, TREATMENT, AND TRAINING IN AZERBAIJAN

Aysel Akbarova, Gulnar Mammadova
National Centre of Ophthalmology named after acad. Zarifa Alieva, Baku, Azerbaijan

Introduction

Retinopathy of prematurity (ROP) is a leading cause of preventable childhood blindness worldwide. Barriers to ROP screening and difficulties with subsequent evaluation and management include poor access to care, lack of physicians trained in ROP, and issues with objective documentation.

Purpose– to present the improvements of ROP screening, diagnosis, treatment, and achievement in the last 6 years, as well as to present the effectiveness of the application of the optimal ROP fundus visualizing system for teaching in this field in Azerbaijan.

Material and methods

Innovations in the frequency of ROP (retinopathy of prematurity) observation, timely detection, treatment, ROP screening, and diagnosis in the last 5 years have been presented in Azerbaijan. During this period, 1798 patients weighing 500-2500 grams and born at 25-35 weeks of gestation were examined.

Results

ROP was found in 636 (35,4%) of these children and 63 (9,9%) of these children had been treated. APROP was found in 31 (4,9%) of the treated children, in others, ROP has evolved over the classical stages. Spontaneous regression occurred in 573 (90,1%) children. The methods of treatment received by children in the neonatal period, diseases they had undergone, pregnancy history of mothers and ROP risk factors were studied. Low birth weight and gestational age, multiple pregnancies, oxygen therapy, SPAP, RDS, pneumonia, delayed breastfeeding, cerebral hemorrhage, anemia, blood transfusion, NEK, surfactant, thrombocytopenia, antibiotic treatment, number of pregnancies, number of births, a form of delivery, intrauterine infection and premature separation of the couple were statistically significant as

risk factors for ROP (p<0.05). Over the years, 48 (7,5%) children have been diagnosed with the 5th stage of ROP. Blindness was found in two of these children due to ineffective treatment and in 46 cases due to late examination of ROP. The fundus of children with ROP was examined after local anesthesia, through a cap speculum, with a 20 or 28 D lens and HEINE OMEGA 500 DV1. The peripheral retina was examined by scleral identification with a retinal depressor, and fundus images were recorded. These images were used for educating residents and families.

Conclusion

The results of ROP screening, treatment and education activities show that ROP-related blindness is decreasing over the years in Azerbaijan.

RETINAL DETACHMENT IN PEDIATRIC POPULATION

Lala Akhundova
National Centre of Ophthalmology named after acad. Zarifa Alieva, Baku, Azerbaijan

Introduction

Retinal detachments (RD) that occur in children are very different in etiology, anatomy and prognosis compared to the adult population. Pediatric RD includes rhegmatogenous, tractional, traumatic and exudative retinal detachment. Purpose - to evaluate the results of the surgery on pediatric group of patients.

Material and methods

A retrospective study of clinical cases of patients under the age of 15 years old who were clinically diagnosed and underwent RD surgery in the period from 2011 to 2022 at the Zarifa Aliyeva National Ophthalmology Centre, Baku, Azerbaijan.

Results

A total of 43 patients (46 eyes) were included in this study, of which 3 patients (6.98%) had bilateral RD. Of these patients, 5 (11.63%) had tractional RD (retinopathy of prematurity, primary persistent

hyperplastic vitreous), 21 (48.84%) had rhegmatogenous RD (high myopia, congenital retinoschisis, Stickler syndrome), 12 (27.9%) had traumatic RD, 5 (11.63%) were due to other types of RD (Coats' disease, coloboma, familial exudative vitreoretinopathy). Postoperative visual acuity, if verifiable, is 1.14±0.79 LogMAR. Anatomical success correlated with postoperative visual acuity ($p<0.001$) and was significantly higher in rhegmatogenous RD compared to tractional RD (95% vs 60%, $P<0.05$).

Conclusion

Visual and anatomical outcomes differed between different retinal detachments in the pediatric patient population. Rhegmatogenous retinal detachments have been associated with better anatomical and functional outcomes, whereas tractional retinal detachments have poorer functional and anatomical outcomes.

BASIC PRINCIPLES OF LAMELLAR CORNEAL TRANSPLANTATION

Züleyha YALNIZ AKKAYA, MD, Prof, FEBO, FICO
University of Health Sciences, Ankara Training and Research Hospital, Türkiye

Lamellar corneal transplantations have become the first line surgical therapy for most of the corneal pathologies. Descemet membrane endothelial keratoplasty is the gold standard for endothelial diseases even whit mild to moderate stromal opacities. Deep anterior lamellar keratoplasties is the gold standard for stromal diseases when endothelium is healthy. However, the transition from penetrating to lamellar surgeries needs a period of learning curve. This talk will focus on the basic principles of Descemet membrane endothelial keratoplasty and deep anterior lamellar keratoplasty using diagrams and short surgical videos.

CLINICAL SIGNIFICANCE OF CORNEAL TOPOGRAPHIC INDICES IN LASER REFRACTIVE SURGERY

Sidiqa Aliyeva
National Centre of Ophthalmology named after acad. Zarifa Alieva, Baku, Azerbaijan

Introduction

Laser refractive surgery of the cornea occupies an important place among the effective methods of correction of various types of ametropia. The arsenal of laser keratorefractive operations for ametropia is increasing every year. Today, it is difficult to imagine performing one or another laser refractive surgery without a detailed optometric examination. On the basis of the current research, the calculation of topographic indices, which are quantitative parameters that allow for a more detailed evaluation of the optical quality and regularity of the cornea, was proposed. Corneal indices, the calculation of which are algorithms built into the software of most modern topographers.

Purpose – to analyze the topographic indices of the cornea and evaluate their significance in laser refractive surgery.

Material and methods

Correlation analysis of topographic indices was carried out in 2 groups of patients. The first group included 70 eyes in 40 patients aged 24 to 42 years (34.67±5.44 years) with myopia of varying degrees before and at various times after LASIK and FemtoLASIK operations. The second group consisted of 40 eyes of 34 patients with grade I keratoconus (28 eyes) and grade II (12 eyes). The age of the patients ranged from 18 to 40 years (29.48±4.43 years). Keratotopographic studies were performed on the devices Pentacam HR and Wavelight Oculyzer. Particular emphasis was placed on the analysis of keratotopographic indices.

Results

Conducted studies revealed direct statistically significant a correlation between corneal indices and refractive cylinder values. The most significant was a positive correlation ($r=+0.67$; $P<0.001$) between cylinder size and surface variation index (SVI). A negative correlation

was noted between central pachymetry data and corneal indices. This negative correlation was greatest with Keratoconus Index (KI, r=-0.65; P<0.001) and Central Keratoconus Index (CKI, r=-0.76; P<0.001). In addition, a direct statistically significant correlation was obtained between central keratometry value (central K) and corneal indices, with this correlation being greater with KI (r=+0.66; P<0.001) and CKI (r=+0.77; P <0.001).

Conclusion

Analysis of the topographic indices of the cornea at the stages of patient selection and choice of the type of laser vision correction will allow excluding patients with subclinical stages of keratoconus, dry eye syndrome and determining indications for a personalized toporaphically oriented operation.

COMBINED HAMARTOMA OF THE RETINA AND RETINAL PIGMENT EPITHELIUM (CLINICAL CASE)

Khalid Aliyev

National Centre of Ophthalmology named after acad. Zarifa Alieva, Baku, Azerbaijan

Introduction

Combined hamartoma of the retina and retinal pigment epithelium is a benign, slightly prominent, partially pigmented tumor localized around the optic nerve disc or in the fundus middle periphery. Two clinical variants of retinal hamartoma have been described: calcified and non-calcified.

Purpose – differentiation of hamartoma with retinoblastoma and melanoma of the choroid, assessment of vision, and life prognosis of the patient.

Materials and methods

A clinical case of the patient with a combined hamartoma of the retina and retinal pigment epithelium was described in this research work. The standard method of examination was used along with spectral optical coherence tomography in this clinical case.

Results

While the ophthalmoscopy of the patient's fundus, in the right eye - at the level of the inferotemporal vascular arcade, there is an obliteration, which bulges forward, without pigment, with a smooth surface, but with a porous appearance, an irregular border, a whitish-colored focus was observed. Additionally, another focus was found around the optic nerve disc from the nasal side, which partially covers it and is accompanied by obliteration vessels. In the OCT examination, thickening and homogeneity of the inner layers of the retina in the focus area, elevation towards the vitreous body, uneven profile of the focus, cyst-like spaces in its stroma, shadow effect in the outer layers, and a normal profile of the choroid were noted.

The patient was sent for computer tomography (CT) of the internal parenchymatous organs and magnetic resonance imaging (MRI) of the brain to determine tuberous siderosis. No pathological changes were noted in the CT examination of internal organs. However, in the MRI examination of the brain, a cortico-subcortical hyperintense pathological signal change in the posterior lateral area of the frontal lobe on the right side and a millimeter-sized nodular structural change adjacent to the walls of the body of the lateral ventricles on both sides were noted.

Based on the examinations, the patient was diagnosed with combined hamartoma of the retina and retinal pigment epithelium associated with tuberous siderosis. The dynamic observation was advised.

Conclusion

Dynamic observation of the patients with combined hamartoma should be carried out for differential diagnosis with choroid melanoma, as well as for early detection of complications and selection of treatment method for this pathology. The application of optical coherence tomography for complex diagnostic allows for the early diagnosis of hamartoma of the retina, to determine its forms and choose the adequate treatment.

CHOROIDAL NEOVASCULARIZATION CAUSED BY ANGIOID STREAKS: SEVEN-YEAR FOLLOW-UP

Aygun Aliyeva, Gunay Rustambayova

Introduction

Angioid streaks are irregular lines that radiate away from the optic disc to the retinal periphery, lying deep into the retina. They indicate the breaks in the calcified Bruch's membrane. The most common complication of angioid streaks is choroidal neovascularization. They appear primarily bilaterally and asymmetrically.

Materials and Methods

We report a 29-year-old man with choroidal neovascularization caused by angioid streaks.

The study emphasizes seven years of follow-up of the disease treated with intravitreal bevacizumab and aflibercept injections. There were no injection related complications.

Results

After a follow-up period of 7 years, the patient received 22 intravitreal bevacizumab and 4 intravitreal aflibercept injections in the right eye and 3 intravitreal bevacizumab injections in the left eye. No injection-related adverse events were reported. At last visit the Best Corrected Visual Acuity was 0.05 in his right eye and 0.01 in the left eye

Conclusion

Anti-VEGF treatment can help the clinician to stabilize the disease and achieve gradual progression. Nonetheless, it cannot help to prevent significant vision loss in long-term follow-up in all cases.

ACUTE ZONAL OCCULT OUTER RETINOPATHY

Aysel Aliyeva
HAT medical clinic, Baku, Azerbaijan

Introduction

Acute zonal occult outer retinopathy (AZOOR) may be precipitated by various retinal disorders and is characterised by rapid loss of visual field which cannot be explained by the ophthalmoscopic changes consequent upon the initiating disease. The electroretinogram (ERG) is abnormal, indicating that the field loss is due to retinal dysfunction. The phenomenon was first recognised in the multiple evanescent white dot syndrome as the enlarged blind spot syndrome. It was subsequently described with multifocal inner choroidopathy and acute macular neuropathy.

Purpose – to report a 30-year follow- up of a clinical case with progressive acute zonal occult outer retinopathy (AZOOR).

Material and methods

This study included an ophthalmic examination, optical coherence tomography (OCT), visual field studies, an ERG investigation, and a review of the relevant literature.

Results

A 34-year-old woman presented with a central scotoma in her right eye that had lasted for 5 months and a similar complaint in her left eye for a week. Changes in the fundus were minimal. The diagnosis was difficult. Later, as a result of the detection of a pronounced change in the ERG, local narrowing of the visual field (VF) and other symptoms, it was possible to make a diagnosis of AZOOR. We treated this patient first with parabulbar injections of dexamethasone and then with intramuscular ceftriaxone and intravenous dexamethasone. This treatment has had a stable positive effect.

The difference between this disease and other diseases accompanied by a decrease in ERG is the good response to systemic corticosteroids (parabulbar or intravenous dexamethasone). The difference between this disease and other diseases accompanied by a decrease in ERG is the good response to systemic corticosteroids (parabulbar or

intravenous dexamethasone). This disease is characterized by periodic exacerbations and gradual progression. After 30 years of observation of the present case, there was a significant decrease in visual acuity (VA) and the visual field (VF) and almost total retinal dystrophy, with the reduced ERG.

Conclusion

AZOOR occurs suddenly, most often in women. Initially, minimal retinal changes are characteristic of this disease, accompanied by clearly defined areas of retinal dystrophy. There is a local narrowing of the visual field and a decrease in the amplitude of the ERG.

THE ROLE OF THE ORTHOKERATOLOGICAL LENSES IN MYOPY CONTROL AND RESULTS OF ONE YEAR EXPERIMENT IN OUR COUNTRY

Gunay Aliyeva
Badam Medical Center

Introduction

Control of myopia progression has become of greater interest as rates of myopia and high myopia continue to increase, particularly in developed countries. Myopia and high myopia prevalence have been increasing in many regions, including the United States, Europe, Israel, Australia and many East Asian countries. Although the majority of very young children are hyperopic, myopia progression typically begins in the elementary school years, by 10 years of age, and progresses in the second decade of life. Orthokerathology can be defined as a technique involving the programmed application of contact lenses to manipulate corneal curvature. Following the first united states Food and Drug Administrartion approval of overnight lenses for all ages, alleviating many of safety concerns, orthokeratology has became increasingly popular worldwide. From 2021 august we are start to use in our country

Purpose – to investigate Axial elongation (AXL) during using the orthokerathology lenses in myopic patients and analyses the slowing effect of orthokeratology lenses.

Material and methods

We are investigate 10 patients with moderate myopy during the one year. Subjects underwent a complete ophthalmologic examination including uncorrected visual acuity, best-corrected visual acuity, manifested refraction, cycloplegic refraction, autorefraction, AXL measurement with IOL Master (Carl Zeiss, Germany), Scheimpflug imaging topography (Pentacam; Oculus Germany). Every night before the sleeping patients wearing the OKL. They are provided 8 hours of sleeping. Our purpose for myopy control analysis was the measuring and comparing increasing the AXL elongation during the wearing Orthokeratology lenses. All patients AXL was measuring every 6 month.

Results

This study included 10 patient, 20 orthokerathology lens-treated myopic childrens eyes. The age at initial lens wear was 8.63 years. All patients refrarction was emmetropic during the control every 3 month and they have the vision 20/20 without the eyeglasses. We were getting 3 RESULTS: 1st group: 12 eyes AXL was increase 0,15mm, 2nd group: 4 eyes AXL was increase 0,19 mm and 3rd group 4 eyes AXL was increase 0,2 mm.

Conclusion

In the past few decades, the use of orthokerathology treatment worldwide has became more popular because of its effectivnes in the correction of myopia and the resolution of associated safety issues. In conclusion we confirm effectiveness of orthokerathology lenses for preventing in myopic patients.

USE OF COENZYME Q10 ANALOGS FOR THE TREATMENT OF LEBER'S HEREDITARY OPTIC NEUROPATHY

Pinar ALTIAYLIK OZER MD, Associate Professor
Ankara Ufuk University Faculty of Medicine, Ophthalmology Department, Ankara, Turkey
drpinar@yahoo.com

Precise text

The purpose of this informative lecture is to share the recent strategies for the treatment of Leber's Hereditay Optic Neuropathy and mainly to discuss the crucial use of Coenzyme Q10 analogs. The discussion will be open to all of the meeting attendants, enabling all to share their own experiences about the topic.

Abstract

Leber's hereditary optic neuropathy (LHON) is the first mitochondrial disease defined, by Von Graefe in 1958. It is also the first maternally inherited disease discovered. Sudden painless central visual field loss in young patients especially in their 2nd/3rd decade is it's classical presentation. A progressive vision loss, especially with a typical cecocentral scotoma should arise a suspicion of this hereditary optic neuritis. Young males are effected the most (10-20 % females) and a subacute vision loss in fellow eye develops soon during the disease. Stress, alcohol, smoking, cafein, head trauma, menapause or postpartum estrogen are thought to be the mostly known triggering factors. Exact diagnosis is by genetical testing for the mitochondrial mutations determined for LHON. Steroids and B12 replacement have no established effect in the treatment of the disease but recent studies proved that antioxidant treatments like Coenzyme Q10 may a critical role for these cases by way of impairing live but inactive neurons. A short chain syntetic analog of Coenzyme Q10, called idebenon has now a novel use for the treatment of this disease and nearly total recovery of patients can be observed in most of the patients during Idebenon treatment apart from the mutation type, besides a high rate of spontaneous recovery which can be seen by some good prognostic mutations of the disease. The recent strategies for the treatment of

Leber's Hereditay Optic Neuropathy are planned to be shared in this session and to discuss the crucial use of Coenzyme Q10 analogs and results of the treatment with some case presentations are also planned to be included.

SIMPLE EYELID MASS EXCISIONAL BIOPSY RESULTS AND MALIGNANCY RATES

Ulviyya Askarova[1], Ömer Faruk Yılmaz[1], Halit Oğuz[2]
1-Goztepe Prof. Dr. Süleyman Yalçin City Hospital, Department of Ophthalmology, Istanbul, Turkey
2-Istanbul Medeniyet University Faculty of Medicine, Department of Ophthalmology, Istanbul, Turkey

Objective

The aim of this study is to discuss the pathology results and malignancy rates of eyelid masses that we performed simple excisional biopsy in the ophthalmology clinic of the town state hospital.

Material and methods

The clinical and histopathological results of all 129 patients who applied to the outpatient clinic of the Hendek/Turkey district state hospital between 2016 and 2020 with a mass in the eyelid and underwent surgery were evaluated retrospectively. The age, localization of the mass, number and histopathological results of the cases were recorded. Patients with large, irregular borders and requiring eyelid reconstruction that cannot be treated with simple excision were not included in the study.

Results

Histopathologically, 119 patients (92,2%) were benign, 7 patients (5.4%) were malignant, and 3 patients (2.3%) were premalignant. Benign lesions include squamous cell papilloma, seborrheic keratosis, fibroepielial polyp, verruca, nevuses, cysts, chalazion and xanthelasma. Well-differentiated squamous dysplasia, eccrine poroma and actinic keratosis hyperkeratotic type were found as premalignant lesions. Malignant lesions were found as Basal cell carcinoma, Squamous

cell carcinoma, Keratoacanthoma and Basosquamous metatypical carcinoma. The pathology was reported as squamous cell carcinoma in an 85-year-old female patient, who had undergone simple excision with a preliminary diagnosis of chalazion that developed 2 weeks ago and did not respond to treatment.

Conclusion

2.3% premalignant and 5.4% malignant pathology rates were found in patients who underwent simple excision. this malignancy rate is higher than we expected preoperatively. Especially in elderly people, masses that grow in a short time and do not respond to medical treatment should be evaluated carefully, even if they are clinically benign, even if chalazion is pre-diagnosed. The mass should be excised as a whole with clean surgical margins and the diagnosis should be pathologically confirmed. If the surgical margins are not clean, a second operation should be planned.

THE EFFECT OF COVID-19 HOME CONFINEMENT ON MYOPIA PROGRESSION IN CHILDREN

Asker Bulut, Assistant Professor, MD
Department of Ophthalmology, Istanbul Medipol University, Faculty of Medicine, Istanbul, Turkey

Purpose

The aim of this study is to investigate the effect of COVID-19 Home Confinement on the increase of myopia in the pediatric age group.

Methods: For this purpose, the files of myopic patients under 18 years of age who were examined in the outpatient clinic in the last year were analyzed retrospectively. Subjective refraction values etermined from the patients' files in 2018, 2019, 2020 and 2021 examinations between March and May were examined. Myopic progression over the years was analyzed by calculating the manifest refraction spherical equivalent (RMSE) value. Exclusion criteria were ocular disease, refractive error of 1 diopter or more, degenerative myopia, ocular surgery history, ocular trauma history, and collagen tissue disease.

Results

The mean age of 310 patients who met the criteria included in the study was 15.08 ± 2.02 years, and 218 (70.3%) were female and 92 (29.7%) were male. The mean MRSE values of the patients were found to be -1.83 ± 1.19 in 2018, -2.14 ± 1.26 in 2019, -2.46 ± 1.36 in 2020 and - 3.12 ± 1.36 in 2021. Accordingly, between 2018-2019, -0.31 ± 0.21 D (P <0.001), between 2019-2020 -0.31 ± 0.25 D (P <0.001), between 2020-2021 -0.65 ± 0.29 D (P <0.001) it was observed that there was an increase in myopia.

Conclusion

Although myopia in childhood seems progressive at all times, it has progressed more significantly during the COVID-19 Home Confinement, possibly with the effect of spending more time in closed environment and increasing indoor activity.

THE ROLE OF THE EYEBALL SURFACE IN THE PROFESSIONAL ACTIVITY OF THE PLASTIC SURGEONS, COSMETOLOGISTS, OPHTHALMOLOGIST OTOLARYNGOLOGISTS

Askerova L.M., Dadasheva C. B.

Research centre of ophthalmology of FSBEI VO RRMU named after H. I. Pirogov a network of many-specialized medical clinics "Stolitsa"

Introduction

Inspite of the constant improvement of the technology of reconstructive-plastic/ oculoplastic; ophthalmological, Lor/darcyological operations, cosmetic manipulations of the periorbital zones, the number of dissatisfied patients by the results of the surgeries/manipulations with pathological changes of the eyeball surface is steady growing that leads to the increase of the rehabilitation period.

The aim of the present investigation - analysis of the eyeball surface lacrimal status in patients after the conducted reconstructive-plastic, ophthalmological, Lor surgeries, cosmetic procedures in the long term postoperative period.

We carried out the complex investigation of the functional state of the eyeball surface- all links of the lacrimal system of 879 patients who were subjected to the reconstructive-plastic, ophthalmological, Lor operations, cosmetologic manipulations of the periorbital zone. The investigated group included the patients, appealed to us in 6 months and more, after the operation/manipulation, with complaints of foreign body, reddening of the eyeball surface, lacrimation and "dry eye" syndrome.

Out of them

197-after cosmetic blepharoplasty, 186-after reconstructive blepharo- plasty, 105- after reconstructive ZOR surgeries, 109-after ophthalmological, 159-after associative oculoplastic surgeries, 123-after cosmetologic manipulations.

Results

In all patients in postoperative period the violation of the lacrimal film stability, disbalance of the lacrimal system of different degree of expression was observed. In postoperative period in 468 (53,2%) patients the combined violations of various links of lacrimal system was detected: in 242 (27, 5%) patients the pathology of the tear producing apparatus was established; in 169 (19,2%)- the pathology of the tear-adducent apparatus was established.

Conclusions

The primary changes of the eyeball surface disbalance of lachrymal system, as a rule, proceeds without subjective complaints from patients and not always possible to identify them by anamnesis. Only by progressing of the lacrimal system disbalance, the complete clinical picture of the lacrimal film defect develops.

That's why in the postoperative period all patients with or without complaints on foreign body, reddening of the eyeball surface, lacrimation and/or "dry eye" syndrome must investigate the eyeball surface.

The complex method of examination of the functional ability of all links of lachrymal system- eyeball surface makes it feasible to plan the surgery technique taking into consideration the correlation of inflow - outflow of tear fluid, to present the secondary (iatrogenetic) violations of the

tear film stability, to decrease the rehabilitation terms, the numbers of unsatisfied patients by the results of the carried out surgeries.

SURGICAL TREATMENT IN PATIENTS WITH SEVERE DIABETIC PVR

Orhan Ateş

Inflammatory agents such as VEGF, which increases in the eye as a result of ischemic retinopathy developing in patients with long-term uncontrolled diabetes, have been identified as the main cause of deterioration in the retina and other structures of the eye.

Diabetic retinopathy is a pathological and complex disease that causes macular edema, retinal ischemia and retinal neovascularization as a result of internal and external blood retinal barrier disruption caused by inflammatory factors, increased vascular permeability and retinal vascular endothelium and dysfunction. Diabetic retinopathy is divided into two main stages as non-proliferative diabetic retinopathy and proliferative diabetic retinopathy. In the proliferative stage, complications such as retinal detachment, neovascularization of the optic nerve head and retina, vitreous hemorrhage, new vessel formations in the iris and fibrocellular proliferation may develop.

In the treatment of these complications due to diabetic retinopathy, the systems of minimally invasive vitrectomy provide a faster and safer surgical procedure, increase the comfort of the patient and shorten the recovery period. Many patients present to us with serious complications such as vitreous hemorrhage and tractional retinal detachment as complications of advanced retinopathy.-We evaluated the anatomical and functional results of patients who underwent pars plana vitrectomy and injected silicone oil due to complications of proliferative diabetic retinopathy in our clinic. We evaluated the results of the patient with PPV indication due to complications of Proliferative Diabetic retinopathy. The patients underwent phacoemulsification-intraocular lens implantation in the same session with PPV. It has been observed that combined phacoemulsification-PPV application with severe diabetic PVR is a surgical application that increases anatomical and functional success and allows early visual rehabilitation.

OUR EXPERIENCE OF THE TREATMENT OF CHRONIC AND SYNDROMIC UVEITIS BY POST-COVID-19 PATIENTS

Babakhanova D.M.
Center for the development of professional qualification of medical workers Tashkent, Uzbekistan

Summary

The thesis highlights our observations of patients with severe course and frequent relapses of chronic inflammatory eye diseases during the Covid-19 pandemic.

Inflammatory diseases of the vascular tract account for up to 30% of all eye diseases, of which the etiology is not clear in 70%. In 40% of cases, uveitis occurs against the background of a systemic disease in people of working age. The ophthalmological manifestations of Covid-19 are so frequent and pronounced that the first doctor to raise the alarm about the new coronavirus was a 33-year-old ophthalmologist working in Wuhan, China, Dr. Li Wenliang. Clinically this is manifested by conjunctivitis, keratitis, uveitis, neurochorioretinitis, ocular ischemic syndrome, occlusion of the central retinal artery and vein, glaucoma, superior orbital fissure syndrome, cavernous sinus thrombosis, etc. Ophthalmological complications of COVID-19 were early, late, and in the period of clinical examination (after the illness). We considered cases of complications during the medical examination: 26 patients with uveitis who had Covid-19 and were hospitalized from September to March 2021. The average age of patients was 42,1±0,2 years, of which 12 were women (46 .2%), men – 14 (53.8%). According to nosologies: Behchet – 4, rheumatism and rheumatoid arthritis – 10, psoriasis – 1, Vogt-Koyanagi-Harada syndrome - 2, Reiter's and Bechterew's syndromes – 1 each, unexplained etiology – 7 patients. All patients with chronic uveitis before Covid-19 were in stable remission. Relapses of uveitis were observed 1-4 months after the coronavirus infection. Iritis, iridocyclitis – 22 patients (84.5%), neurochorioretinitis – 4 patients (15.5%). In 12 (46%) patients, the process was bilateral. Patients were treated according to clinical standards: systemic antibiotics, glucocorticosteroids, antivirals, angioprotectors, non-hormonal anti-inflammatory, desensitizing, osmotic and enzyme

preparations. Locally: mydriatics, corticosteroids, non-hormonal anti-inflammatory drugs in the form of instillations, parabulbar and subconjunctival injections. Glucocorticosteroids of prolonged action parabulbar, into the subtenon's space or intravitreally. In 9 patients a short-term remission within 2-4 weeks ended with a new relapse. In addition to eye symptoms, exacerbation of symptoms of systemic diseases was observed: polyarthritis, pyelonephritis, urethritis, stomatitis, etc. Systemic treatment was supplemented with pulse therapy with glucocorticosteroids, immunosuppressants (cytostatics). In the development of recurrences of the disease, the transferred coronavirus infection played a decisive role, which is proved by the detection of IgM and IgG to SARS-CoV2 in their blood.

CLINICAL MANIFESTATIONS OF EYE DISEASES IN THE SOUTH ARAL SEA REGION

Bakhritdinova F.A.[1], Matkarimov A.K.[2]
1-Tashkent Medical Academy
2-DMC clinic

Introduction

According to the World Health Organization (WHO), at present, due to the deterioration of environmental factors, more than 10% of the world's population has diseases of the organ of vision. As a result of the adverse impact of environmental factors in unfavorable ecological areas, not only the incidence of eye diseases increases, but also specific symptoms appear in the clinical picture of some of them. Currently, special attention is paid to scientific research aimed at studying the specifics of the clinical course of eye diseases, in particular diseases of the internal systems, and, accordingly, the improvement of diagnostics and therapeutic measures in the Aral Sea region in the Republic of Uzbekistan.

Aim

Improving the effectiveness of the treatment of regional ophthalmopathology, taking into account the characteristics of the

clinical manifestations of eye diseases in the conditions of the southern Aral Sea region.

Materials and methods

There were examined 189 patients aged 18 to 90 years old, who were on outpatient and inpatient treatment at the Beruniy branch of the DMC clinic of the Republic of Karakalpakstan for the period 2019-2021, with diagnoses of dry eye syndrome (DES) against the background of chronic conjunctivitis, pterygium and age-related cataract. General ophthalmological methods and special research methods were carried out: A and B-scanning, ultrasonic biomicroscopy, Norn, Jones and Schirmer test.

Results

Analysis of the data showed that the general and primary morbidity of the eyes and auxiliary apparatus in the Aral Sea region is increasing every year. The results of studies of DES against the background of HC indicate that subjective and objective signs in both groups were moderately pronounced, amounting to 28.0±0.8 and 1.8±0.05 in patients of the main group, 28.3±0.8 and 1.78±0.06 in patients of the control group. The results of studies of patients with pterygium show that the disease is rather severe in the region and causes not only a cosmetic defect, but also a sharp decrease in visual acuity (on average 0.26±0.03), up to disability.

The results of studies of patients with cataracts complicated by PES showed that patients mainly complained of a gradual decrease in vision (74 eyes, 88%), fog before the eyes bothered in 18 cases (21.4%). In 39.3% (33 eyes) of cases, the disease lasted 1-3 years, in 22.6% (19 eyes) of cases from 6 months. up to 1 year, in 21.4% (18 eyes) cases up to 6 months, and in 16.5% (14 eyes) cases over 3 years.

Conclusions. Analysis of data on the incidence of ophthalmopathology in the South Aral Sea area indicates that the region is dominated by the incidence of conjunctivitis (46.7%), pterygium (5.8%) and age-related cataract (2.1%), which is a consequence of an environmental disaster and has developed resistance diseases to traditional methods of treatment.

THE EFFICIANCY OF USING INTERFERON ALPHA-2B IN SURGICAL TREATMENT OF CORNEAL AND CONJUNCTIVAL MALIGNANT TUMORS

Rukhangiz Balayeva
National Centre of Ophthalmology named after acad. Zarifa Alieva, Baku, Azerbaijan

Introduction

There are many etiologic factors in developing of corneal and conjunctival cancer. They are: insolation,viral infections,chronical inflammation ,trauma,limbal cell defficiency, vit A defficiency,smoking, long influence of petroleum products. Azerbaijan is south country with increased insolation and developed oil industry, that's why this problem is very actual here.The population of Azerbaijan is 10 mln people.

Purpose – the efficiancy of using interferon alpha-2b in surgical treatment of corneal and conjunctival malignant tumors.

Material and methods

We have 46 patients with this pathology . 42 patients were operated by excision of tumor without any adjuvant therapy.Other four patients were given adjuvant local therapy with interferon alpha-2b over 6 weeks as subconjunctival injection and eye drops before and after excision of tumor. During surgery we used 0,04% mitomycin-C .

Results

In period of follow-up (2-48 months) 2 patients without adjuvant therapy had recurrences. No clinical evidence of recurrence could be recorded in other patients. They had only mild conjunctival hyperemia after 6 weeks of interferon.

Conclusion

The combination of tumor excision and using alpha-2b interferon as adjuvant therapy decreases recurrence in treatment of corneal and conjunctival cancer.

TITLE OF CASE REPORT

Dr. Betül Onal

An ezotropic and ambliopic patient was diagnosed as Macular Hypoplazia.

Precis

An 11 years old female patient suffering from ezotropia and ambliyopia is diagnosed as macular hypoplazia by OCT.

Abstract

11 year old female patient with ambliopic ezotropia has hypermetropic measurements in both eyes.

Corrected vision was RE: 0.7 LE:0.5

Left eye had althernan ezotropia 15 Prizm dyopter.

İn retinal examination: The macular anatomic differantiation was detected.

OCT

The absence of foveolar inner zones are the caracteristics of Macular Hypoplazia.

The 3 main anatomic failours in 'Macular Hypoplazia' are:

1-The absence of foveolar depression

2-The absence of avaskuler zone

3-The absence of foveolar pigmentation.

İt is generally common to have bilateral macular hypoplazia, but rare to have unilateral (only 1 case) macular hypoplazia.

RESTORATION OF THE ANATOMICAL INTEGRITY OF THE LACRIMAL CANALICULI AND THE MEDIAL CANTHUS IN CASE OF INJURIES OF THE LACRIMAL DUCTS

Buzrukov B.T., Bobokha L.Yu.
Department of Ophthalmology and pediatric ophthalmology, Tashkent Pediatric Medical Institute.

Abstract

In the general structure of ocular surgical pathology, tear duct ruptures are relatively rare and range from 2 to 5%. The most common are traumatic injuries of the horizontal part of the lacrimal canaliculus. Unskilled primary surgical treatment of wounds of the lacrimal ducts leads to their obliteration, which in turn causes suffering for patients

The aim. To study the results of the surgical method of restoring the horizontal part of the damaged lacrimal ducts using a modified probe using a fishing line.

Materials and methods

Under our supervision in the department of ophthalmology of the TashPMI clinic there were 32 patients with injuries of the horizontal part of the lacrimal ducts. The age of the patients varied from 4 to 14 years. Boys made up 17 (53.1%), girls 15 (46.8%). All patients underwent ophthalmological research methods and consultation of related specialists.

Results

In all patients, the injury of the lacrimal ducts was combined with trauma to the eyelids. Restoration of the lower and upper lacrimal ducts was performed according to our proposed method, which consists in plastic surgery of the medial angle and restoration of the lacrimal ducts (rational proposal No. 491 dated 22.02.99) using different concave-ended needles. Complete patency was restored in 14 (82.35%) patients, in 3 (17.65%) children there was a slight stenosis of the medial part of the lacrimal canaliculus, which was eliminated after double bougienage and lavage. In 6 patients with intubation of the lacrimal canaliculus on the 5th day from the side of the conjunctiva, there was a divergence of the sutures by 1–2 mm. It was decided to

leave the intubation material. Over the next 10 days, the tubule fully recovered and began to function. The silicone thread is removed after 40-50 days. By this time, all patients had a complete restoration of the anatomical structure of the tubules.

Conclusion

The technique proposed by us is effective, less traumatic and can be widely used in ophthalmic traumatology, both in adult and pediatric practice. This technique restores not only the anatomical integrity, but also the functional parameters of the lacrimal ducts.

A NEW SURGICAL TECHNIQUE FOR GRADE 4 ECTOPIC INNER FOVEAL RETINAL LAYER IDIOPATHIC EPIRETINAL MEMBRANES

Ecem Önder Tokuç[1], Ilkay Kilic Muftuoglu[2], Ece Başaran Emengen[3], Gürsel Yılmaz[4], Levent Karabaş[3]

1 - Derince Training and Research Hospital, Clinic of Ophthalmology, Kocaeli, Turkey

2 - İstanbul Training and Research Hospital, Department of Ophthalmology, İstanbul, Turkey

3 - Kocaeli University School of Medicine, Department of Ophthalmology, Kocaeli, Turkey

4 - Baskent University School of Medicine, Department of Ophthalmology, Ankara, Turkey

Aim

To describe a new adjunctive surgical technique for improving foveal contour in grade-4 ectopic inner foveal retinal layer (EIFL) epiretinal membranes (ERM) eyes.

Methods

The surgical technique and a retrospective interventional single-center series of cases were described. Standard transconjunctival three-port PPV with ERM peeling was performed using 23-gauge instruments. After standard procedures, Fluid perfluorocarbon (PFCL) was injected

over macula and a gentle centripetal perifoveal massage was performed from the center of the fovea to the arcuades to reduce traction over the macular surface in stage 4 EIFL ERM eyes. Pre- and postoperative functional and anatomical parameters were analyzed.

Results

Twenty cases were performed efficiently under this technique with improvement in anatomical features and visual function after the surgery. There were no serious complications associated with that new adjunctive surgical technique.

Conclusion

Perifoveal massage under PFCL can be a useful adjunctive technique for accelerating foveal contour improvement and improving visual acuity.

OPTICAL COHERENCE TOMOGRAPHY MEASUREMENTS OF RETINAL NERVE FIBER LAYER THICKNESS IN CAUCASIANS CHILDREN AND TEENAGERS

Matanat Efendiyeva
National Centre of Ophthalmology named after acad. Zarifa Alieva, Baku, Azerbaijan

Introduction

Research retinal nerve fiber layer (RNFL) thickness children and teenagers by optical coherence tomography (OCT) is very important for help to identify the any changes of RNFL thickness in person aged 5 to 20 years.

Purpose – to determine the effects of age, sex and eye side on the retinal nerve fiber layer (RNFL) in Caucasians children and teenagers as measured by the time domain optical coherence tomography (Stratus OCT).

Material and methods

A total retrospectively of (72 eyes) 36 participants from 5 to 20 years of age. Two groups 1-10 years (a mean of 7.2 ± 0.4 y) and 11-20 years (a mean of 15.5 ± 0.7 y). Their RNFL thicknesses were measured by OCT

[OCT, Stratus OCT (OCT3); Carl Zeiss Meditec, Dublin], and 7 parameters associated with the RNFL thickness were analyzed by the RNFL thickness average analysis program. Were also analyzed the influences of several factors (such as sex, age and eye side) on RNFL thickness. The results were statistically process by Student and Wilcoxon method.

Results

Average RNFL thickness was 106.3 ± 2.5 µm (range 87.32–159.4) in first group (1-10y.) and 97.0 ± 3.8 µm (range 56.24–125.7) in the second group ($P < 0.05$). Significant differences mean interocular RNFL thickness were found between two age groups in inferior, temporal quadrants and inferior (max.) were 13.4 ($P < 0.01$), 15.8 ($P < 0.01$), and 13.4 ($P < 0.01$) µm, respectively. While significant differences between two age groups were observed in 12-clock hour sector analysis, mainly in the temporal quadrant 9-clock ($P < 0.001$) and 10-clock ($P < 0.01$), and the inferior quadrant 6-clock; 7-clock ($P < 0.05$). Differences in the average RNFL between gender, right and left eyes were not statistically significant. Among ONH parameters, there were no statistically significant differences in any parameters.

Conclusion

This study has may help to identify the changes of RNFL thickness in Caucasian children and teenagers aged 5 to 20 years by OCT, because normative database Stratus, or any OCT is not available for patient age< 18years.

THE ROLE OF 27- GAUGE MINIMALLY INVASIVE SURGERY IN COMPLEX VITREORETINAL DISEASES

Gürkan Erdogan

Recently the use of 27 gauge (G) systems have become widespread, including in severe vitreoretinal pathologies. The smaller-gauge vitrectomy systems have made the multifunctional use of vitreous cutter, such as scissors, pick, spatula, and backflush, possible to use fewer instruments in vitreoretinal surgery. Furthermore, the need for chandelier light is eliminated, and the number of sclerotomies is

decreased in a certain number of cases with the application of unimanual surgery instead of bimanual surgery. With these features, 27-gauge vitrectomy systems provide significant advantages in the surgery of complex vitreoretinal diseases such as tractional and exudative retinal detachment, intraocular lens dislocation, suprachoroidal hemorrhage, subretinal membranes and pediatric cases.

GATT(GONIOSCOPY-ASSISTED TRANSLUMINAL TRABECULOTOMY) SURGERY FOR GLAUCOMA TREATMENT

Dr. Kushtarbek Ergashev
Eye clinic Gozde İskenderun Kyrgyzstan/Turkey

It is well known that glaucoma comes first in cases of irreversible vision loss and is the second leading cause of blindness worldwide. Nowadays in developed countries, less than 50% of people are unaware of their diagnosis, mainly because of the asymptomatic nature of chronic glaucoma. Micro-invasive glaucoma surgery (MIGS) has exploded over the last eight years. GATT, an important member of the MIGS family, is characterised as a conjunctival-sparing surgical procedure that is safer and less invasive than conventional filtration surgery. The patient who applied to our clinic had glaucoma and IOP did not decrease despite triple antiglaucomatous treatment, then we was planned GATT surgery, because of the minimal complications and minimal surgical trauma to the eye. GATT could effectively lower IOP and decrease medications for patients with POAG. The most significant advantage of this method is the ability to perform trabeculotomy without any conjunctival or scleral incisions. GATT surgery may be considered as an alternative surgery to trabeculectomy.

TRAUMATIC BILATERAL SUPERIOR OBLIQUE PARALYSIS: ADJUSTABLE HARADA-ITO PROCEDURE

Prof. Dr. Fatih Mehmet Mutlu
UHS, Gülhane Faculty of Medicine, Ankara, Türkiye

Symptomatic excyclotorsion causing torsional diplopia is an important clinical problem in cases with acquired superior oblique muscle palsy. Harada-Ito surgery (HI) is a widely used method for treating excyclotorsions. This method relieves the torsional diplopia by increasing the effect of the incyclotorsion. In this presentation, I aimed to report the clinical features of patients with torsional diplopia due to acquired trochlear nerve palsy and the results of adjustable HI surgery in these cases.

COMPARATIVE ANALYSIS OF UVEITIS PATIENTS WITH COMBINED CO-INFECTIONS AND DIABETES

Konul Feyziyeva
National Centre of Ophthalmology named after acad. Zarifa Alieva, Baku, Azerbaijan

Introduction

Various systemic infectious agents are involved in the pathogenesis of uveitis, including hepatitis viruses. On the other hand, there is also a link between anterior uveitis and diabetes. Given that uveitis is one of the leading causes of blindness, this situation shows us the importance of recognizing the connection between these diseases.

Purpose – to conduct a comparative analysis of patients with uveitis with co-infection and diabetes mellitus.

Material and methods

The study was conducted: among 277 inpatients diagnosed with uveitis. 138 (49.8%) patients were men, and 138 (50.2%) were women. The age range was 19-80 years, and the total number of bed days was 1-30 days.

Results

In 27 of them - (12 women and 15 men) were detected co-infections - hepatitis B, hepatitis C, Treponema pallidum, and HIV (one or more jointly) infections. Along with uveitis, 23 people (12 women and 11 men) were diagnosed with diabetes. The mean age of uveitis patients with co-infections receiving inpatient was 45 (26-69 years). Their inpatient treatment period was 6-26 days (an average of 12 days). In addition, the average age of patients with uveitis suffering from diabetes was 54 years (22-75 years), and the number of bed days was 7-20 days (average: 10 days). One diabetic patient with uveitis was diagnosed with co-infection, and another uveitis patient was diagnosed with both viruses (hepatitis B and hepatitis C co-infection). One uveitis patient was a carrier of HIV. Uveitis of both eyes was more common in the background of diabetes (OU-44%), but uveitis in the fond of co-infections mainly covered one eye (OU-22%).

Conclusions

Even though co-infected uveitis patients were younger, and uveitis mainly covered one eye than patients with diabetes mellitus, patients with uveitis with co-infection had many bed days and required more intensive treatment.

RECURRENT RETINAL DETACHMENT

Tural Galbinur

Ophthalmo Retina Centre, Prime Hospital

The recurrence of retinal detachment following rhegmatogenous retinal detachment (RRD) is a relatively common complication that can lead to reduced visual acuity and requires further surgery. In best condition, RRD can be repaired with a single surgical intervention; however, despite excellent skill, and the introduction of high-end technology, up to 5-10% of cases require additional interventions to ultimately repair recurrent detachments. It is thus important to study the outcomes of multiple interventions to understand whether performing repeat vitrectomy on patients with a history of failed surgeries is worthwhile. Thus, recurrent retinal detachment remains a

significant challenge for vitreoretinal surgeons as well as the patients considering the economic and the emotional burden of undergoing multiple interventions. The advent of microincision vitrectomy system, perfluorocarbon liquids, and effective intraocular tamponades has opened new doors for managing re-detachments. In this article, we have reviewed and summarized the various causes and approaches for management for optimal anatomical and functional outcomes.

COULD TOPICAL COENZYME Q10 BE A NEW TREATMENT MODALITY FOR CORNEAL EDEMA AFTER FACOEMULSIFICATION?

Umay Guvenc, Zuleyha Yalniz-Akkaya, Ayse Burcu
University of Health Sciences, Ankara Training and Research Hospital, Ophthalmology Clinic, Ankara, Turkey

Introduction

Coenzyme Q10 has been shown to be effective in cellular regeneration. Thus, we aimed to evaluate its effect in the treatment of visually significant corneal edema.

Materials and Methods

Patients who had developed corneal edema after phacoemulsification and intraocular lens implantation between 2020 August and 2021 February were evaluated retrospectively in this clinical trial. The patients were divided in two groups. The Q10 Group comprised 38 eyes of 38 patients who were treated with Coenzyme Q10 (Coqun) in addition to the standard postoperative treatment protocol. The Control Group comprised 48 eyes of 48 patients who were followed with the standard treatment protocol. Corneal thickness was evaluated by Pentacam.

Results

In Q10 Group and Control Group the mean age was 72,43±6,82 years and 69,81±8,35 years (p=0,126) respectively. The groups were similar in terms of gender (p=0.50), existence of diabetes (p=0,315), use of stains (p=0,999), initial visual acuities (p=0,075) and initial thinnest

corneal thickness (p=0.14). The groups were similar in terms of initial and final intraocular pressure values (p=0,640, p=0,382) and final visual acuities (p=0,856). The initial pupil center thickness was significantly higher in the Q10 Group as the mean was 809,08±101,25 µ in the Q10 Group and 754,65±130,79 µ in the control group (p=0,039). The initial thinnest corneal thickness was also significantly higher in the Q10 Group as the mean was 674,16±64,07 µ in the Q10 Group and 627,94±78,63 µ in the control group (p=0,004). The groups were statistically similar in terms of median recovery times (p=0,670), final pupil center thickness (p=0,214) and final thinnest corneal thickness measurements (p=0,344) and the reduction of corneal thickness at the pupil center (p=0,214).

The reduction of corneal thickness was calculated by substracting the initial and final corneal thickness at thinnest location. In the Q 10 Group the decrease in thinnest corneal thickness values were significantly greater as the mean value was 132,97±49,33 µ in the Q 10 Group and 94,85±63,35 µ in the control group (p=0,003).

Conclusion

Topical coenzyme Q10 seems to have adjunctive effect on resolving the corneal edema after phacoemulsification.

REGIONAL FEATURES OF URGENT AND EMERGENCY APPEALS AT THE THIRD STAGE OF OPHTHALMOLOGGCAL CARE

Banovsha Hadjiyeva
National Centre of Ophthalmology named after acad. Zarifa Alieva, Baku, Azerbaijan

Introduction

Adequacy of emergency and uncomplicated ophthalmological assistance is important for successful treatment of patients and restoration of visual functions. Therefore, urgent and emergency care is provided at all stages of ophthalmic care.

Purpose – to assess the regional features of urgent and emergency appeals at the III stage of ophthalmmological care based on the example of the National Centre of Ophthalmology named after acad. Zarifa Aliyeva.

Material and methods

For observation for 2019 related 2907 applications to urgent and emergency reasons were selected. The distribution of appeals was carried out by cities and districts of republican subordination. The frequency of appeals of residents of cities and districts per 100 thousand population was determined.

Results

The frequency of appeals to NOC with urgent reasons was 32.6±0.600⁄0000of population of the republic. The value of the indicator was the smallest for residents of the city of Ganja (11.7±1.90⁄0000)and the maximum for residents of the Siyazan region (80.1±13.70⁄0000). The reason for such spreading of the indicator is considered to be the unequal availability and potential of the regional ophthalmological service. The traumas of the eye and its adnexa prevail (64.8% of all visits) in the structure of urgent reasons for application at the III stage of ophthalmological care (64.8% of all applications).

Conclusion

Reduction of appeals for urgent and emergency reasons in the III stage of ophthalmological care is possible by strengthening the network of ophthalmological services in the regions.

OLGULARLA GLOKOMDA TIBBİ VE CERRAHİ TEDAVİ

Prof. Dr. Halit OĞUZ
İstanbul Medeniyet Üniversitesi Tıp Fakültesi Göz Hastalıkları Anabilim Dalı Başkanı, Göztepe
Prof. Dr. Süleyman Yalçın
Şehir Hastanesi Göz Hastalıkları Kliniği Eğitim İdari Sorumlusu
Kadıköy, İstanbul-Türkiye Tel: 535 4689844

Glokomun tıbbi ve cerrahi tedavi ilkeleri sunulacaktır. Genel bilgiler yanında kliniğimizden olgular da sunulacaktır. Sunumda konjenital glokoma da değinilecektir. Olguların kliniği, aldığı medikal tedavileri irdelenecektir. Ayrıca olgulara yapılan cerrahilerin videoları sunulacaktır.

MEDICAL AND SURGICAL TREATMENT IN GLAUCOMA WITH CASE PRESENTATIONS

Halit Oguz, MD.
Professor and Head Department of Ophthalmology, İstanbul Medeniyet University School of Medicine, Göztepe Prof. Dr. Süleyman Yalçın City Hospital, İstanbul, Türkiye

The principles of medical and surgical treatment of glaucoma will be presented. In addition to general information, cases from our clinic will also be presented. Congenital glaucoma will also be mentioned in the presentation. The clinic of the cases and the medical treatments they received will be presented. In addition, videos of the surgeries performed on the cases will be presented.

LONG-TERM RESULTS NON -VALVED GLAUCOMA DRAİNAGE IMPLANT

Jamil Hasanov

National Centre of Ophthalmology named after acad. Zarifa Alieva, Baku, Azerbaijan

Purpose – to evaluate efficacy the non-valved glaucoma drainage implant (GDI) with plate size 350 mm2 in refracter glaucoma treatment.

Material and methods

Patient with refracter glaucoma treated with non-valved GDI combinate with or without cataract surgery from 2016 through 2021 with a minimum follow-up of 6 months (operated by a single surgeon) were included. Dynamics of visual acuity, intraocular pressure (IOP), the need for antiglaucoma drugs, as well as postoperative complications and additional interventions were analyzed. Success was defined as IOP ≥6 mmHg or ≤21 mmHg (complete without antiglaucoma medications and qualified with antiglaucoma medications), repeat glaucoma surgery or loss of light perception was failure.

Results

Non-valved GDI resulted in a significant decrease in IOP and the amount of antiglaucoma drugs, while there was no significant difference in pre- and postoperative visual acuity. It can be implanted alone or in combination with cataract surgery. Complications resulting from non-valved GDI implantation included hypotony, postoperative elevated IOP, tube exposure, diplopia, temporary motility disturbances, and corneal decompensation. In cases of lack of effectiveness of conservative treatment of these complications, surgical intervention was performed.

Conclusions

The use of non-valved GDI when standard antiglaucoma surgery is unsuccessful or unacceptable is an effective treatment option in terms of lowering IOP. After surgery, you should be prepared for problems associated with the tube of the GDI and hypotony.

OCULAR AXIAL LENGTH CHANGES IN PSEUDOPHAKIC CHILDREN AFTER CATARACT SURGERY.

Hasanova Nigar
National Centre of Ophthalmology named after acad. Zarifa Alieva, Baku, Azerbaijan

Background

Pseudophakic children tend to develop a myopic shift over time. This may be in part due to accelerated growth in axial length. The purpose of this study was to evaluate and compare the postoperative change in axial length (AL) in pseudophakic eyes, after extraction of traumatic or congenital cataract.

Methods

Included in this retrospective study were 35 children who had undergone surgery for traumatic, unilateral congenital, or bilateral congenital cataracts. All patients were under 11 years old at the time of operation. Axial length was measured perioperatively as well as 2 year or more postoperatively. The three groups were subdivided according to patients ages (below or above 6 years). The AL in the operated eyes was compared with AL of the fellow nonoperated eyes. The difference in AL between operated and fellow non-operated eyes was compared among the groups.

Results

AL was greater for operated eyes than for fellow nonoperated eyes (traumatic cataract: p=0.05; unilateral congenital cataract, p=0.06). Axial elongation was significantly greater in children under 6 years old at operation than in those older than 6 (p=0.025). The difference in rate of AL between operated and fellow nonoperated eyes, per 2 year of follow-up, was similar for traumatic and unilateral congenital cataract groups.

Conclusions

This study demonstrated a tendency toward greater axial lengthening in pseudophakic eyes of children, when compared with their nonoperated eyes. No significant difference was found in the tendency for increased axial lengthening between eyes operated on for traumatic cataracts and those operated on for congenital cataracts.

THE IMPORTANCE OF THE APPLICATION OF ARTIFICIAL INTELLIGENCE IN OPHTHALMOLOGY AND OUR EXPECTATIONS

Samira Huseynli
National Centre of Ophthalmology named after acad. Zarifa Alieva, Baku, Azerbaijan

Introduction

In recent years, artificial intelligence (AI) techniques have shown to be an effective diagnostic tool to identify various diseases in healthcare. As a field with a lot of imaging and measurable data, ophthalmology is ideal for application of artificial intelligence. In this study we provide an overview artificial intelligence (AI) models for ophthalmic applications, potential challenges in clinical deployment and the path forward and discuss our results of AI applications to the anterior segment addressing keratoconus (KC).

Methods

The ophthalmic diseases where AI is being used are diabetic retinopathy, glaucoma, age-related macular degeneration, retinopathy of prematurity, retinal vascular occlusions, keratoconus, cataract, refractive errors, retinal detachment, squint, and ocular cancers. Machine learning (ML) algorithms build a model (e.g. logistic regression, artificial neural network, decision trees) using sample training data, in order to make predictions or decisions without being explicitly programmed. The discriminating performances of the AI models were evaluated by accuracy and the area under the ROC curve (AUC).

In our study we evaluate artificial intelligence (AI) model based on objective indices from the Scheimpflug Pentacam HR system for the detection of clinically healthy, clinical and subclinical KC eyes. A total of 970 eyes of 970 patients were enrolled, including 430 eyes from normal control subjects, 128 eyes from subclinical patients and 412 eyes from keratoconus (KC) patients.

Results

AI assist the ophthalmologist in rapid screening of its patients, thus reducing diagnostic errors and facilitating treatment. In keratoconus

the AI model showed great overall discriminating power in the KC (accuracy = 94.67%, AUC = 0.985) and SKC (accuracy = 85,02 %, AUC = 0.915).

Conclusions

Nowadays ophthalmologist should know about AI resources and judicious use of them when understanding their limitations.

ORBITAL EXENTERATION AS A RESULT OF LATE PRESENTATION OF PATIENTS WITH MALIGNANT TUMORS

Gunay Ibrahimzade
National Centre of Ophthalmology named after acad. Zarifa Alieva, Baku, Azerbaijan

Introduction

Cancer patients commonly present at very late stages. It is often too late for treatment by the time the disease is diagnosed. Orbital exenteration is a psychologically and anatomically disfiguring procedure which reserved for the treatment of potentially life-threatening malignancies arising from the orbit, paranasal sinuses or periocular skin. Of all exenterations presenting to ophthalmologists, 40–50% are required for tumors in the eyelid or periocular skin. 99% of these are basal cell carcinomas and 4–6% each are squamous cell carcinomas or sebaceous gland carcinomas. Other less common tumors include conjunctival malignant melanoma, adenoid cystic carcinoma of the lacrimal gland, and uveal melanoma with extrascleral extension. CT and MRI scanning help in the assessment of tumor spread within the orbit.

Purpose – to describe our experience regarding orbital exenteration of late-presented patients with malignant tumors.

Material and methods

The present cases are three late-presented female patients with different malignant tumors. The first case - 52-year-old woman with

melanoma of the conjunctiva, who refused chemotherapy treatment.

Results

Two years later, the tumor had spread to the orbital tissues and an exenteration of the orbit was performed. The second case - 80-year-old woman who underwent exenteration for orbital squamous cell carcinoma. 7 years ago this patient refused squamous cell carcinoma of the conjunctiva surgery. The third case – 93-year-old woman presented to the doctor for the first time with an advanced stage of orbital basal cell carcinoma. Orbital exenteration was carried out.

Conclusion

Progressive lesions require extensive surgery and other available treatments. Despite the relatively small percentage of invasive disease today, advanced stages can still occur; either as a result of the late presentation of the patient, inadequate initial therapy aimed at maintaining critical periorbital structures, or due to the high aggressiveness of the tumor. In some cases, a crippling operation is inevitable - orbital exenteration.

THE SCOPE OF THE OPERATION DEPENDING ON THE AGE OF THE CHILD IN CONGENITAL CATARACT SURGERY AND PREVENTION OF COMPLICATIONS

Zahide Jabrailova

Azerbaijan State Institute of Postgraduate Education named after A.Aliev Baku, Department of Ophthalmology

Introduction

Intraocular lenses (IOLs) are now the standard-of-care for the optical correction of aphakia in older children and are being used with increasing frequency in younger children and infants. While some small case series have reported better visual outcomes following unilateral IOL implantation during infancy when compared to the correction of aphakia by a contact lens, it has also been reported to be associated

with a higher frequency of postoperative complications.

Purpose – to compare contact lenses and intraocular lenses (IOLs) for the optical correction of unilateral aphakia during infancy.

Material and methods

In a randomized, multicenter (12 sites) clinical trial, 114 infants with a unilateral congenital cataract were assigned to undergo cataract surgery either with or without IOL implantation. Children randomized to IOL treatment had their residual refractive error corrected with spectacles. Children randomized to no IOL had their aphakia treated with a contact lens

Results

The median age at the time of cataract surgery was 1.8 months. Fifty patients were 4–6 weeks of age at the time of enrollment, 32 patients were between 49 days and 3 months of age and the remaining 32 children were 3 to 7 months of age. Fifty-seven children were randomized to each treatment group with either IOL placement or aphakia. The eyes with cataracts had shorter axial lengths and steeper corneas on average than the fellow eyes.

Conclusion

The optimal optical treatment of aphakia in infants is unknown. IATS was designed to provide empirical evidence whether optical treatment with an IOL or a contact lens following unilateral cataract surgery during infancy is associated with a better visual outcome.

OCCULT PTOSIS IN PATIENTS PRESENTED FOR UPPER EYELID BLEPHAROPLASTY

Imran Jarullazada
Funda Hospital, Hidayatzada 163, Baku, Azerbaijan.

Introduction

Upper blepharoplasty is one of the most frequent procedures among patients presenting to oculoplastic division. It is well known that dermatochalasis is most of the times is age related as well as

blepharoptosis. Compensatory overreaction of frontalis muscle is frequently observed and obscures blepharoptosis in these kind patients.

Purpose

To evaluate presence of ptosis in patients seeking upper blepharoplasty procedure attending ophthalmology department.

Material and method

This is a prospe ctive study included patients attended ophthalmology department seeking upper blepharoplasty during the year 2021. Concomitant blepharoptosis were evaluated in all patients. Ptosis were defined as MRD1 of less that 3 mm.

Results

In total 48 patients were included in the study 41 female and 7 male patients with mean age 56 yo. Twenty-seven patients (56%) had simultaneous blepharoptosis surgery along with upper blepharoplasty. Mean MRD1 improved from 1.3 mm to 3.2 mm. There were 20 bilateral cases and 7 seven unilateral. There were 4 (14.7 %) reoperations (3 ptosis and 2 blepharoplasty patients).

Conclusion

Blepharoptosis is a common entity found in patients undergoing upper blepharoplasty. Evaluation of preoperative ptosis in patients undergoing upper blepharoplasty helps to identify those who can benefit from simultaneous surgery as it enables less post-op visits to the clinic. It is a safe procedure and yields satisfactory outcome as functional as well as cosmetic.

FEMTOSECOND LASER ASSISTED INTRASTROMAL CORNEAL RING IMPLANTATION IN KERATOCONUS - OUR EXPERIENCE

Жомарт Джунусбеков
Crystal Cornea Ophthalmology Center

The intrastromal corneal ring segments implantation is widely used as an effective method for keratoconus correction. Femtosecond laser technology represents very precise and modern approach in corneal tunnel creation. Nevertheless complication like an extrusion of the implanted ring segment rarely appears. There are few different types of intrastromal corneal segments available. Ferrara Ring (AJL Ophthalmic S.A.) is used for keratoconus treatment.

ORGAN OF VISION IN BILATERAL COMPLETE OCCLUSION OF THE INTERNAL CAROTID ARTERIES

Dilbar Kamaldjanovna Makhkamova
Republican Specialized Scientific and Practical Medical Center of Eye Microsurgery Department of Pathology of the Optic Nerve and Retina
Uzbekistan, Tashkent E-mail: dilbarmk@mail.ru

Purpose

To study the state of the organ of vision in a patient with bilateral complete occlusion of the internal carotid arteries.

Material and methods

Patient X. Kh., born in 1950, complaints - gradual deterioration of vision in the left eye. According to the patient, from the anamnesis, he notes an increase in Arterial blood pressure, for several years he has been observed by an angioneurologist, a therapist. The patient underwent standard ophthalmic and special research methods. Standard ophthalmic methods included visiometry, tonometry, biomicroscopy, biomicroophthalmoscopy, A and B scans, static computerized

perimetry, optical coherence tomography with angiography. In addition to the above research methods, MRI of the brain and orbit, ultrasound dopplerography of brachiocephalic vessels were also performed.

Results

Ophthalmological status: Visus: OD =0.5 with sph (+) 1.0 in = 0.7; OS=0.2 does not correct. Refractometry: OD - sph +1.0 D cyl +0.5 D ax 35°. OS - sph +1.0 D cyl +0.25 D ax 115°. IOP OD/OS = 15/14 mmHg Biomicroscopy: OD — senile arch on the cornea, grade 3 ischemic angiopathy of the limbus, anterior chamber of medium depth, initial opacities on the lens. The fundus of the eye: ONH is pale pink, the boundaries are indistinct in places, the arteries and veins are narrowed. The retina is pale, macular and foveolar reflexes are preserved, pathological foci are not visualized. OS — senile arch on the cornea, grade 3 ischemic angiopathy of the limbus, anterior chamber of medium depth, initial opacities on the lens. The fundus of the eye: ONH is pale, the borders are indistinct in places, the arteries and veins are narrowed. The retina is pale, macular and foveolar reflexes are preserved, pathological foci are not visualized. Ultrasound examination: A-scan: OD - 23.75 mm, anterior chamber - 3.10 mm, lens - 3.21 mm. OS - 23.22 mm, anterior chamber - 3.15 mm, lens - 3.35 mm.

When conducting computer perimetry, there was a general decrease in the threshold photosensitivity of the retina in the right eye, a sharp decrease in the photosensitivity of the retina with the presence of absolute scotomas in the left eye. At the same time, OD: MD - 18/28 (64%) dB, PSD - 7.69 dB, OS: MD -2/24 (8%) dB, PSD -21.12dB. OST OS - the thickness of the retina in the macular region is sharply increased to 530 microns. The foveal depression is completely smoothed out, a convex of macular deformity is formed, and the reflectivity of the retina is reduced. Severe edema of the neuroepithelium from the inner nuclear layer to RNFL. The interface between the outer and inner segments of photoreceptors is also not traced. The thickness of the RNFL is sharply increased in all sectors (due to pronounced edema). The shape of the curve is atypical - straight.

The results of laboratory tests: there is an increased level of low and very low density lipoproteins, a low level of high density lipoproteins. Triglycerides (TG) - 4.1., Low density lipoproteins (LDL or βLDL) - 4.6

mmol / l, very low density lipoproteins (LDL or βLDL) - 1.8 mmol / l. When conducting Doppler sonography, bilateral occlusion of the internal carotid arteries is noted. Common carotid artery 45-50% external carotid artery 55-60%, circle of Willis is closed. The patient had Doppler ultrasound data of the brachiocephalic trunk from 2018, where 80% occlusion of the right ICA was noted, complete occlusion of the left ICA.

MRI of the brain revealed multiple lesions in the white matter of the brain. Atrophy of the cerebral hemispheres was also visualized. The patient was diagnosed with ocular ischemic syndrome. Complicated cataract. Chronic ischemic optic neuropathy. Chronic neovascular retinal membrane. Concomitant diagnosis: Bilateral complete occlusion of the carotid arteries. The patient was consulted by angiosurgeons, conservative treatment was prescribed. We also recommended anti-ischemic, neurometabolic, angioprotective drugs.

Conclusions

It should be noted that in some cases, with good consistency of collateral circulation, even with bilateral complete occlusion of the internal carotid arteries, the organ of vision is in satisfactory conditions, which is manifested by relatively high visual acuity, retinal light sensitivity and optical coherence tomography parameters. But it must be taken into account that the timely detection of such pathologies, and, accordingly, the appointment of the necessary therapeutic procedures, will prevent a decrease in visual functions and a deterioration in the patient's quality of life.

BILATERAL POINT INTERNAL CHORIOIDOPATHY AFTER SARS COV-19 WITH COMPLICATED CHORIODAL NEOVASCULARIZATION

Dilbar Kamaldjanovna Makhkamova, Nargiza Ilkhamdjanovna Karimdjanova, Mufazzal Muzaffarovna Iminova, Orifjon Sobirov, Saidislom Buzrukkhonov

Republican Specialized Scientific and Practical Medical Center of Eye Microsurgery Department of Pathology of the Optic Nerve and Retina Uzbekistan, Tashkent

E-mail: dilbarmk@mail.ru

Purpose

To study the condition of the eye in a patient with bilateral punctate internal choroidopathy after SARS COV-19 with complicated CNV

Setting

Patient X. X., born in 2002, applied to the polyclinic department of RSNPMCMG. (20 years old) with complaints of floaters, low vision, uneven objects and photophobia. According to the patient, a month ago she suffered covid, where the omicron strain (SARS CoVID-19) was found.

Methods

The patient underwent standard ophthalmic and special research methods: visiometry, tonometry, biomicroscopy, biomicro ophthalmoscopy, A and B scanning. From special research methods, static computerized perimetry, fluorescein angiography (TRC NW8 TOPCON) and optical coherence tomography with angiography (DRI OCT TRITON PLUS TOPCON 1050 nm.)

Results:

Ophthalmological status: Visus: OU =0.05 n/a. OST OU Macula protrudes into the vitreous body 1.428/1,276 µm. Lamellar separation of the outer nuclear and outer plexiform layers from the myoid and ellipsoid zones. There are intraretinal cystic inclusions in the parafoveolar zone and local detachment of the neuroepithelium in the perifoveolar and parapapillary zones. At the same time, local adhesion

of the neuroepithelium with peripheral detachment is visualized in the perifoveolar zone from the lower nasal side. The pigment epithelium is heterogeneous. In the perifoveolar zone from the nasal side, focal elevation of the pigment epithelium is determined. Optic disc excavation parameters, RNFL and GCL are overestimated due to media turbidity.

Conclusions

Thus, the development of vasculopathy and coagulopathy in CoVID-19 contributes to the appearance of choroidal neovascularization due to ischemia of the chorioretinal layers, which subsequently led to the development of cystic macular edema. This, in turn, was the cause of a persistent sharp decrease in visual functions in a young girl.

ACHIEVEMENTS AND PROSPECTS IN THE FIELD OF MOLECULAR GENETIC RESEARCH AT RSNPMCMG

Karimova M.Kh., Yusupov A.F.

Republican Specialized Scientific and Practical Medical Center for Eye Microsurgery (Uzbekistan)

Introduction

The beginning of the 21st century was marked by the fact that in practical medicine it became possible to use new molecular genetic methods. The most common methods for detecting genetic disorders include allele-specific polymerase chain reaction (PCR), real-time PCR, DNA sequencing, and hybridization using DNA chips.

In recent years, there has been an increase in thrombotic lesions, especially among the young, able-bodied part of the population, who have a genetic predisposition to hypercoagulability. Among the many risk factors that increase the likelihood of thrombosis, genetic factors are the subject of intensive research.

Methods

We have studied more than 250 patients with thrombosis of the CVD and its branches, as well as 220 healthy individuals with no history

of eye diseases and thrombotic history. In this work, using molecular genetic studies, we studied the effect of identified mutations in the FII, FV, MTHFR, and PAI-I genes on the formation of thrombosis of the CVD and its branches. As a result of studies of 220 conditionally healthy donors, a rather low frequency of the G20210A mutation in the FII gene (1.4%) was revealed, which proves the population characteristics of this genetic marker.

The calculated frequency of the mutant allele of the FII gene in the studied group of patients and healthy donors was 2.6% and 0.7%, respectively (X2= 3.1; P=0.04; OR=3.5; 95% CI 0.777-15.85). The chance of developing thrombosis in carriers of this allele was 3.5 times higher than in the control group.

The facts obtained by us prove the very high significance of the mutation in the FV-Leiden factor gene in the formation of a predisposition to retinal vein thrombosis in the Uzbek population. When analyzing the frequencies of homozygous genotypes of the C677T polymorphism of the MTHFR gene in the group of patients, it was noted that among men the frequency of the mutant allele T/T was very high and amounted to 14.5%, which is 2.5 times more often than in women with this genotype (5.4 %) and more than 15 times more than in the control group (0.9%).

Conclusions. Since this is one of the few works in Uzbekistan on the study of the relationship between gene polymorphisms and the risk of developing retinal diseases, in order to finally confirm these conclusions, we consider it necessary to conduct an extended study of the entire gene cluster and additively interacting genes of other determinant genes.

ANALYSIS OF THE MAIN CAUSES OF THE DEVELOPMENT OF POSTTRAUMATIC PROLIFERATIVE VITREORETINOPATHY

Sabina Madjidova
National Centre of Ophthalmology named after acad. Zarifa Alieva, Baku, Azerbaijan

Introduction

The development of proliferative tissue is one of the severe complications of penetrating wounds of the eyeball. The main risk factors according to the literature include: damage to the ciliary body, prolapse of the vitreous body in a significant amount, intraocular foreign body, vitreous hemorrhage, endophthalmitis, etc.

Purpose – to conduct a retrospective analysis of the main causes of post-traumatic proliferative vitreoretinopathy (PVR) based on the results of 10-year clinical material of the National Centre of Ophthalmology named after acad. Zarifa Aliyeva.

Material and methods

A retrospective analysis of the clinical material included 4780 patients with eye injury according to ten-year data (2012-2021). Of these, 3401(71.2%) patients had an open eye injury (OEI), and 1379(28.8%) patients had a closed eye injury (CEI). Research methods: ophthalmological, laboratory, general clinical, statistical.

Results

Of the eye injury severity index (EISI) 1,2,3,4,5th degrees of the total number of patients with OEI were 16.9%, 34.7%, 28.7%, 11.3%, 8.4 %, and with CEI – in 23.4%, 14.6%, 25.5%, 22.3%, 15.2% respectively. After OEI PVR developed in 204 patients (5.9%), after CEI – in 93(6.7%). Of the 297 patients with PVR 61.9% were men, most of them were aged 26 to 60 years (64.3%). The highest rate of PVR development was observed in 2012(14.1%), the lowest – in 2021(4.5%). Most often the development of PVR was diagnosed after contusion (31.3%) and eye rubture (29.3%). The average time for the development of PVR ranged from 1 to 6 months after an eye injury of a high degree (1,2,3) severity.

Conclusion

The development of PVR in the prevailing majority of cases was noted after an open eye injury (68.7%). PVR developed on average 1-6 months after the eye injury with a high severity index.Improvement in vitreoretinal surgery has made it possible in recent years to achieve a significant reduction in the incidence of post-traumatic PVR. In the presence of risk factors for the development of PVR strict dynamic monitoring of these patients is necessary after the primary surgical treatment of the eye in the near and long term.

EFFECTS OF CHEMICAL FACTOR ON ORGAN OF VISION (CASE REPORT)

L.M. Maksudova

Tashkent Institute of Postgraduate Medical Education, Uzbekistan E-mail: doclaylo@rambler.ru

Patient M.D, born in 1992, was admitted to the hospital with complaints of OS: pain, redness, photophobia, lacrimation, reduced vision.

From anamnesis: during work at home solution with alkaline lime stroke the left eye. After that the patient wash eyes with warm water and was hospitalized at the Republican Clinical Hospital in ophthalmological branch.

Clinical observation: OD- without pathology. OS- skin of the eyelids is edematous, lid slit is narrowed, opens with difficulty, there is mucopurulent discharge in the conjunctival cavity, papules are observed on the eyelid skin, expressed blepharospasm, edematous cornea is edematous of the type of “Porcelain Glass”. The remaining areas could not be seem.

Dynamic observation included detection of visual acuity, intraocular pressure, straight and indirect ophthalmoscopy, biomicroscopy, B-scan. The criteria for eye state evaluation were: the incidence of various complications; speed and quality of healing of burn wounds and functional state of the organ of vision.

Eyes examination: Visual acuity OD = 1,0; OS = 0,01 n/a. Intraocular

pressure (transpalpebrally using IGD-02 diathera) 16,0 / 17,0 mm.hg. Perimetry was not performed due to caligo corneae.

Ophthalmoscopy: OD without pathological features; OS – Ophthalmoscopy is impossible due to caligo corneae.The degree of clinical manifestations depended on the duration of the time of cleansing the wounds from necrotic tissue, epithelialization and scarring of burn wounds and aggravation was observed in increasing of healing period duration. It should be noted that a patient undergone eye burn maintains signs of active inflammation for at least a year.

THE ROLE OF ERG IN THE MODERN DIAGNOSIS AND TREATMENT OF RETINAL DISEASES

Lala Mammadova
National Centre of Ophthalmology named after acad. Zarifa Alieva, Baku, Azerbaijan

Introduction

The electroretinogram (ERG) is a diagnostic test that measures the electrical activity generated by neural and non-neuronal cells in the retina in response to a light stimulus. The International Society for Clinical Electrophysiology of Vision (ISCEV) introduced minimum standards for the ERG in 1989. International Society for Clinical Electrophysiology of Vision provides an introduction to standard visual electrodiagnostic procedures in widespread use including the full-field electroretinogram (ERG), the pattern electroretinogram (pattern ERG or PERG), the multifocal electroretinogram (multifocal ERG or mfERG), the electrooculogram (EOG) and the cortical-derived visual evoked potential (VEP), a-wave: initial corneal-negative deflection, derived from the cones and rods of the outer photoreceptor layers, b-wave: corneal-positive deflection; derived from the inner retina, predominantly Muller and ON-bipolar cells.

Material and method

National Ophthalmology Center Retina department ERG and VEP examination room.

Results

ERG evaluation at Stargardt-fundus flavimaculatus, Bull's-eye maculopathy, Best vitelliform macular dystrophy, Retinitis pigmentosa (rod–cone dystrophy), Leber congenital amaurosis (LCA), Choroideremia, Cone and cone–rod dystrophy, Enhanced S-cone syndrome, Stationary photoreceptor disorders and ect. ERG in all inherited and other some retina diseases isone of the most importatnt diagnostic methods. It is not a new diagnostic method despite these years it starts be more popular than before.

Conclusion

Knowledge of the electrophysiological phenotype is of importance in disease identification and patient counseling. Increasing phenotype–genotype correlations can be anticipated in future years. When, and if, treatment intervention for these inherited disorders becomes available, it is likely that electrophysiological examination will facilitate suitable patient identification and will be crucial in the evaluation of treatment efficacy.

TUBERCULOSIS-RELATED SERPIGINOUS-LIKE CHOROIDITIS: SPECIALITIES OF DIAGNOSIS AND TREATMENT OPTIONS

Farida Miraghayeva
National Centre of Ophthalmology named after acad. Zarifa Alieva, Baku, Azerbaijan

Introduction

Serpiginous-like choroiditis is a rare immune-mediated sub-entity of tubercular uveitis with a usually deleterious outcome. Treatment is still controversial.

Purpose – to indicate that treatment comprising multiple anti-tubercular and multiple immunosuppressive agents seems to be able to halt the disease progression.

Materials and methods

Retrospective analysis of clinical features of 3 patients with Tb-SLC. This

retrospective case series included patients diagnosed with Tuberculin skin test (Mantoux test)-positive serpiginous choroiditis, seen at the National Ophthalmology Centre named after academician Zarifa Aliyeva. Inclusion criteria were patients with serpiginous choroiditis with complete OCT, FFA and ICG angiography images.

Results

The 41 y/o, 23y/o, 29 y/o men presented the bilateral decreased vision, a fundus examination consistent with serpiginous choroiditis. Two of the patients had old tuberculosis lesions on chest CT scans. We conducted QuantiFERON® TB Gold, which was positive. the antituberculous therapy was given to all patients, with additional general steroid treatment in 2 patients. The lesions started healing within a few weeks. After 1 year of finishing the therapy, the lesions remained healed as pigmented lesions without any recurrence.

Conclusion

The serpiginous-like choroiditis may be the initial presentation of presumed ocular tuberculosis. Nevertheless, the correct diagnosis of this entity can be challenging and delayed by the imprecise results from the currently available methods.

USE OF THE AVEDRO KXL SYSTEM IN THE CORNEAL CROSS-LINKING TECHNIQUE

Mirana Mirishova
National Centre of Ophthalmology named after acad. Zarifa Alieva, Baku, Azerbaijan

Introduction

Crosslinking of the cornea to stabilize cornea and prevent the progression of the disease. During corneal crosslinking, tight junctions between collagen molecules are due to the formation of new strong bonds. This causes an increase in the density and structure of the cornea. This method is considered an important process in preventing the development of ectasia.

Purpose – to evaluate the efficacy and safety of Avedro KXL accelerated transepithelial crosslinking technique with corneal impregnation with 0.1% Riboflavin.

Material and methods

The technique of accelerated transepithelial Crosslinking using the Avedro KXL was performed in 37 eyes of 37 patients diagnosed with progressive Keratoconus (I-III Amsler Classification). Riboflavin was administered by impregnation for 20 minutes and then processed UVA radiation (for 10 minutes (UV energy: 9 mW/cm2, Total energy: 5.4 J/cm2, pulsed treatment mode).

Results

A decrease in corneal astigmatism from 3.50 D to 2.50 D was observed. The keratometric values decreased from 47.25 to 42.20 D and the Best Corrected Visual Acuity improved from 0.4 to 0.8.

Conclusion

We consider the treatment using the Avedro KXL transepithelial accelerated transepithelial Crosslinking technique, an effective and safe technique in the management of corneal ectasias. With this method, the duration of the procedure is reduced.

THE ROLE OF ELECTROPHYSIOLOGICAL STUDIES IN THE DIAGNOSIS OF DISEASES OF THE RETINA

Nigar Sadigova
Azerbaijan Medical University, the Department of Ophtalmology, Baku city

Electrophysiological measurements of vision function has always been under attention due to ability to support for study of the pathophysiological processes and glaucoma lesions and as well as to offer potential extra metrics of the function which may be a more usable feature than standard automated perimetry in both glaucoma researchers and clinicians for decades. We have considered the fact of contribution of ophthalmology and as well as electrophysiology to the

several problems concerning glaucoma.

Purpose – to study the role of electroretiogramm (ERG) in diagnosis of glaucoma.

Materials and methods

Electrophysiological examination of 4 patients (8 eyes) has been performed. The average age of patients was 59,5±12,5 years. Set of visiometry and electrophysiological study methods (EFT) were applied to all patients. Study of the vision sharpness was performed by Sivstev tables on standard method. Bioelectric activity of retina was assessed by help of objective methods (EFT) including general electroretinography (GERG) and 30 Hz rhythmical electroretinography (RERG 30 Hz).

Results

Loss of ganglious cells of retiona and their axons although it is specific for all optical neuropathies, the condition of lesion during glaucoma includes the structural changes of unique optical nerve discs reflecting the deformation of the combining tissue pathognomonically and its remodelling. It was clarified that, photopic negative response (PhNR) of ERG with pattern change (PERG) and comprehesive, focal or multifocal ERG provides the objective measurement of the ganglious cells function of retina and all of them are sensitive for glaucomatous lesion. The performed studies indicate that, low amplitude of PERG forecases the post-conversion of vision area (from normal to glaucoma) and high speed of progressive thinning of the nerve fibres layer of retina in the suspicious eyes and this indicates the potential role of PEG in determining the risk rate. The obtained information indicates that some part of PERG – PhNR disorders are reversible aspect of dysfunction during glaucoma.

Conclusions

PERG and PhNR reactions obtained from central macula enables to determined the reversible glaucomatous dysfunction in the early stage.

ERG is a significant diagnostic facility enabling to determine the reason of vision loss in point of physiological mechanism and special neurons type of the retina. Thus is specific for the neurons of retinas which arranged along the optical axis of the eye, because current loops made by their reactions easily reveal the change of tension in anterior part of eye.

ORBITAL CELLULITIS

Nilgün Özkan Aksoy, MD.
Assoc. Prof. Sakarya University Faculty of Medicine Training and Research Hospital

Obyective

To evaluate the features of orbital cellulitis (OS) cases, which is an eye emergency that threatens vision even life.

Materials and methods

The clinical findings of OS cases were evaluated in terms of diagnosis, differential diagnosis, etiological factors, imaging methods, complications and treatment methods.

Results

OS is an infection that anatomically involves the posterior of the orbital septum. The most common cause is the local spread of the infection from the paranasal sinuses adjacent to the orbit. It is a reason for urgent admission with vision loss and pain increasing with sudden eye movements clinically. On examination, eyelid erythema, increase in temperature, proptosis, limitation of eye movements and pain with movement, chemosis, decrease in pupillary light reactions and visual acuity can be seen. The patient should be hospitalized; laboratory and imaging methods should be requested urgently and broad-spectrum antibiotic treatment should be started immediately. Optic nerve functions should be monitored as it may cause intracranial complications that increase morbidity and mortality depending on the severity of the infection.

Conclusions

OS is one of the life-threatening eye emergencies with serious intracranial complications as well as vision-threatening complications. Early diagnosis and initiation of treatment are life-saving.

THE EFFECT OF MYOPIC OVERCORRECTION TREATMENT ON ANGLE OF DEVIATION AND REFRACTION ERROR IN INTERMITTENT EXOTROPIA PATIENTS

Dr Öğretim Üyesi Gülce
GÖKGÖZ ÖZIŞIK, Hitit University Faculty of Medicine, Ophthalmology Department, Çorum, Turkey

Introduction

Compare refractive errors and ocular deviation angles before and after myopic overcorrection in patients with intermittent exotropia and the control group.

Methods

This study is a retrospective study. Between June 2018 and March 2022, newly diagnosed intermittent exotropia patients, who applied to the strabismus unit of Hitit University Faculty of Medicine, received overcorrection treatment (Group-1) and did not (Group-2) were included in the study. Near and distant ocular deviation angles and refractive errors with cycloplegia (in spherical equivalents) before and after treatment in the treated group were compared with the untreated group.

Results

Seventeen patients received myopic overcorrection treatment (Group-1), and 14 did not receive myopic overcorrection treatment (Group-2). Between these two groups, there were no significant differences in gender (M/F: 7/10 for Group-1, M/F: 4/10 for Group-2), age (Group-1: 8.88 ± 3.6 years, Group-2: 6.79 ± 2.86 years) and follow-up period (Group-1: 21.59 ± 12.36 months, Group-2: 25.14 ± 9.98 months). Pretreatment refractive errors with cycloplegia in both eyes were significantly different between the two groups ($p<0.001$). Among the refraction values with cycloplegia before/after treatment in Group-1 for the right eye (median [min-max]: 0.9 [(-0.4) – (3.5)] D/ 0.8 [(-1) ,8) – (3.1)] D) there was no significant difference ($p=0.062$) but significant difference was found for the left eye (mean: 0.78 ± 0.88 D/0.54 ± 0.97 D) ($p =0.004$). There was a significant difference between cycloplegic

refractions at the beginning and end of follow-up in both eyes in Group-2 (p=0.004). In Group-1, a significant difference was observed between the pretreatment distance deviation angle without spectacle (median: 20 prism D) and the posttreatment distance deviation angle with spectacle (median: 10 prism D) (p<0.001). Progression values for both eyes [median for right eye Group-1: 0.25 (-0.63- 1.5), Group-2: 0.75 (-0.38 - 2.63), p=0.010] (mean for left eye Group-1: 0.24 ± 0.3, Group-2: 0.86 ± 0.91, p= 0.029) differed significantly between the two groups.

Discussion

Myopic overcorrection therapy is effective in selected cases with intermittent exotropia as long as glasses are used. This treatment may cause myopia progression in patients with intermittent exotropia. Compared to myopic intermittent exotropia patients who do not receive excessive myopic correction therapy, myopic progression is slower in the non-myopic group of patients who receive myopic overcorrection therapy at the same time.

OUTCOMES OF SURGICAL TREATMENT OF CONGENITAL CATARACT

Lukpan Orazbekov, Sabina Smagulova
Kazakh Eye Research Institute, Almaty

Introduction

In studies conducted it is estimated that congenital cataracts are responsible for 5% to 20% of blindness in children worldwide. Babies born with congenital cataracts have a decreased chance of regaining their vision if the cataract is not removed within the first year of life.

Background

Early diagnosis and prompt surgical intervention is critical to prevent irreversible amblyopia. Advancement in surgical techniques and methods of optical rehabilitation has substantially improved the functional and anatomic outcomes of pediatric cataract surgeries in recent years. However, the phenomenon of myopic shift and the process of emmetropization have continued to puzzle pediatric

ophthalmologists and highlight the need for future studies. Posterior capsule opacification is still the major postoperative complication necessitating surveillance in children undergoing cataract surgery early in life. Aim of this study was to evaluate the outcomes of congenital cataract surgery with primary intraocular lens (IOL) implantation.

Methods

Retrospective study included patients between 3 month and 6 years old who underwent lens aspiration with primary IOL implantation. Age at time of surgery, pre- and postoperative best corrected visual acuities, postoperative ocular complications, and any accompanying ocular pathologies were obtained from the patients' charts. Mean refractive changes and degree of myopic shift were analyzed according to the age groups. Operated eyes were also compared with the fellow eyes in unilateral cases.

Results

A total of 133 eyes of 78 patients were included. The average age at time of surgery was 57±10 months. Among the 78 eyes mean visual acuity at the age of 7 was 0.4±0.02. The difference in the mean refractive change between the 2-3 years old and 4-6 years old age groups was found to be statistically significant. In unilateral cases, the operated eyes showed a greater myopic change than the fellow eyes, with no statistically significant difference. The most common postoperative complication was secondary cataract.

Conclusion

Satisfactory visual outcomes can be achieved following pediatric cataract surgery with primary IOL implantation. Secondary cataract was the most common postoperative complications. Myopic shift following surgery are more manifest in younger patients.

FEATURES OF DIAGNOSIS AND TACTICS OF SURGICAL TREATMENT OF THROUGH WOUNDS OF THE EYEBALLS

Sevinj Orujova
Azerbaijan Medical University, Faculty of Military Medicine, Department of Military Surgery

Introduction

Through wounds to the eyeball account for 3 to 10% of all penetrating eye wounds are severe injuries that can lead not only to blindness, but also to loss of the eye as an organ. The question of removing the foreign body, sealing the outlet is solved individually after establishing the stroke of the wound canal, the size and localization of the foreign body. Primary surgical treatment (PST), removal of foreign bodies must be carried out in the conditions of the ophthalmic centre.

Purpose – timely performed primary surgical treatment combined with vitreoretinal surgery allows preserving the eyeball as an organ and obtaining functional results.

Materials and methods

In the Central Military Clinical Hospital Ophthalmic Department we studied 38 wounded with firearms.

Results

In 7 (19%) cases, the outlet was located in the macular region or passed through the optic nerve, which was accompanied by a complete loss of visual functions. A wound passing through the sclera in the posterior segment at different distances from the limb was accompanied by injuries to the lens, choroid, ciliary body, retina, which led to low visual functions. All patients underwent PST during the first 24 hours. The inlet was sealed in all cases. During PST foreign bodies were removed in 20 patients (61%), in other cases they were removed during vitreal surgery. In 2 patients, it was decided not to remove small-sized intra-orbital foreign bodies, the position of which did not threaten visual functions.Vitreoretinal surgery was performed on average 3- 5 days after PST. During it traumatic cataracts were removed with preservation, if possible, of the lens capsule, endolasercoagulation with a diode laser was performed, long-term retinal tamponade was carried out with gas

(C3F8) (n = 10), silicone oil (n = 2). Secondary IOL implantation lasted from 2 months to 3 years, which made it possible to increase visual acuity to 0.3-0.5.

Conclusions

Accurate diagnosis of the course of the wound canal, the localization of the foreign body, timely and fully performed PST in combination with modern vitreoretinal surgery allow you to preserve the eyeball and even get good functional results.

THE TIPS AND TRICKS OF FACIAL BOTULINUM TOXIN A (BTA) INJECTION FOR GOOD COSMETICS RESULTS AND TO PREVENT COSMETIC SIDE EFFECTS

Dr Şerife Özhuy

Botulinum A is a neutotoxin that paralises the injected muscle reversibly. lnjectable botulinum toxin A was granted FDA approval in 1989 for the treatment of blepharospasm and strabismus. İn 1994 BTA enjection is published with a study , for reducing the appearance of facial wrinkles. FDA approval was given for cosmetic use at 2002 and since than it has been used for cosmetic tratment. For cometic effects, BTA is enjected into the facial muscles. Facial muscles are attached to soft tissues rather than bones. So their contractions causes facial experssions. By time this normal expressions causes wrinkle lines on skin . Cosmetically those wrinkle lines gives to the patient old and tired appirance. The cosmetic BTA is effective in dynamic wrinkles. These are often around lips, eyes, forehead,and between eyebrows. The seven main facial wrinkle lines can be treated by BTA injections are : Forehead lines, Worry lines, Bunnies, Crow s feet, Laught lines, Lip lines, Marionette lines. BTA enjected mainly to those dynamic facial muscles: Frontais muscle, orbicularis occuli, procerrius muscle, corrigator supercilia, orbicularis oris, mentalis muscle. To achive better results the main activity of the muscle, and the effects of paralising this activity, must be kept in mind. The functional and cosmeticaly copmlications can be prevented by taking care of injection points and

units. . The main cosmetic complications are: The Mephisto sign, Braw ptosis, palpebral pitosis, strabismus, drooling. BTA is diluated with 2.5 ml of sterile saline and yielded 20 U for each 0.1 ml. Varrying according to the servety of wrinkles, 2- 30 Units can be injected. From the centuries, as the sceince of beauty "Golden Ratio" is calculated. The ratio is the expression of ideal proportion of the face. BTA injections can help to achive Golden Ratio and eyebrow design also. The main BTA injection points and unites per area can be calculated to achieve best cosmetic results.

FREE PAPER SESSION 2: STRABISMUS AND GENERAL OPHTHALMOLOGY

Şerife Özhuy[a], Betül Önal Günay[b]

a-KKTC Sağlık Bakanlığı, Cengiz Topel Hastanesi, Göz Hastalıkları Kliniği, Yeşilyurt, KKTC

b-Sağlık Bilimleri Üniversitesi Trabzon Kanuni Eğitim ve Araştırma Hastanesi, Göz Hastalıkları Kliniği, Trabzon, Türkiye

Title of Case Report

An ezotropic and ambliopic patient was diagnosed as ' Macular Hypoplazia'.

Precis

An 11 years old female patient suffering from ezotropia and ambliyopia is diagnosed as macular hypoplazia by OCT.

Abstract

11 year old female patient with ambliopic ezotropia has hypermetropic measurements in both eyes.

Corrected vision was RE: 0.7 LE:0.5

Left eye had althernan ezotropia 15 Prizm dyopter.

İn retinal examination: The macular anatomic differantiation was detected.

OCT: The absence of foveolar inner zones are the caracteristics of Macular Hypoplazia.

The 3 main anatomic failours in 'Macular Hypoplazia' are:

1-The absence of foveolar depression

2-The absence of avaskuler zone

3-The absence of foveolar pigmentation.

İt is generally common to have bilateral macular hypoplazia, but rare to have unilateral (only 1 case) macular hypoplazia.

INTRAVITREAL BEVACIZUMAB AS FIRST CHOICE TREATMENT FOR VITREOUS HEMORRHAGE IN PROLIFERATIVE DIABETIC RETINOPATHY

Palarie Natalia, Palii Natalia

International Clinic, Ophthalmology Department, Orhei, Moldova

Introduction

Proliferative diabetic retinopathy (PDR) is a significant cause of blindness in working-age individuals. Until recently, waiting for the hemorrhage to spontaneously resolve or performing pars plana vitrectomy were the only lines of treatment for vitreous hemorrhage due to this condition. Purpose: To evaluate the efficacy of intravitreal Bevacizumab (IVB) in dense vitreous hemorrhages (VH) due to PDR.

Materials and Methodology

One hundred five eyes of 92 person aged 54-78 with dense VH (+++, ++++) were included in this study. All patients had type 2 diabetes. At baseline none of the patients had signs of tractional retinal detachment on ultrasonography. Complete ophthalmic examination and ocular ultrasonography were performed at baseline and 1, 6, and 12 weeks and 3, 6, 9 and 12 months after the first injection. Patients were divided into 3 groups according to the duration of VH. Group I included patients with VH less than 6 months (36 eyes), group II included patients with VH occurred 6-12 months ago (39 eyes), in group III were assigned patients with VH occurred more than 1 year ago (30 eyes). All patients once a month received 3 consecutive IVB 1,25 mg injections.

Results

All patients in the group I had complete resolution of VH. In the group II 9 eyes (23%) did not respond to IVB. In the group III 10 eyes did not respond to IVB (34%). Repeated VH within 1 year after the last injection was noticed in 5 (14%) cases in the group I, 11 cases (28%) in the group II and 11 cases (33%) in the group III.

Conclusions

Intravitreal Bevacizumab is very effective in resolving even long lasting dense vitreous hemorrhages in patients with PDR, although its efficacy diminishes when duration of hemorrhage is greater than 1 year. It can be used as a first choice therapy in VH due to PDR with no signs of tractional retinal detachment on ultrasonography.

OUR METHODS IN CATARACT SURGERY OF SMALL PUPILS

Maharram Pirmatov
National Centre of Ophthalmology named after acad. Zarifa Alieva, Baku, Azerbaijan

Introduction

The presence of planar synechiae, a narrow, rigid pupil, atrophy of the iris tissue, and weakness of portions of the zonium ligament lead to a number of difficulties in the surgical treatment of cataracts in glaucomatous eyes. Recently, during surgery in such eyes, the use of additional intraoperative manipulations, such as mechanical dilation of the pupil, sphincterectomy and iridoplasty, is required.

Purpose – application of the modified irrigational cannula in surgery of the complicated cataract in case of a rigid pupil for the prevention of intra- and postoperative complications.

Material and methods

Primary group consist of 30 patients (30 eyes). To these patients for the purpose of expansion of a narrow rigid pupil used intraoperatively the irrigational cannula modified by us “Fork” (a requisition number on the ARE patent U 2016 3014). Control group consist of 22 patients

to whom during surgery of a cataract applied an iris retractors in the form of hooks.

Results

Results of a research were estimated at transaction time, in early postoperative time (to 2 months) and late postoperative term (by the end of 1 year). During surgery in the primary group - 4 (13,3%) patients and in the control group – 11 (41%) patients were observed gifema. Patients without sinekhiya had no gifema. In the early postoperative period (1 week) at 2 patients of the primary group and at 6 patients of control group observed 1-2 mm gifema. In the late postoperative period (12 months later) in the primary group at all patients pupils were round, diameter – 3-4 mm. Visual acuity all patients of the primary group had 0,7-0,8. In control group at 3 patients observed a gap of pupillary edge of an iris, at 14 – irregular shape of a pupil with total absence of reaction to light. Visual acuity in control group was 0,4-0,6.

Conclusion

Carrying out additional intraoperative manipulations often leads to various types of intra- and postoperative complications. In the early postoperative period, patients have an irregular pupil shape due to damage to the sphincter. In the long term after the operation, the pupil does not restore its shape or restores partially.

INDICATIONS AND SURGICAL TECHNIQUES OF KERATOPLASTY IN AZERBAIJAN FROM 2008 TO 2022

Khuraman Ramazanova, Jamil Hasanov, Elmar Kasimov
National Centre of Ophthalmology named after acad. Zarifa Alieva, Baku, Azerbaijan

Introduction

Corneal disorders are the fourth leading cause of blindness in the world. The demand for corneal transplantation is increasing as it is the most frequently transplanted tissue in humans worldwide. Indications for corneal transplantation and techniques of keratoplasty differ from one region to another and are affected by many factors.

Purpose – To review indications and techniques for corneal transplantation in National Ophthalmology Center named after acad. Zarifa Aliyeva from 2008 to 2022

Material and methods

Medical records of all patients who underwent keratoplasty at National Ophthalmology Center named after acad. Zarifa Aliyeva, Baku, Azerbaijan between January 1, 2008, and July 31, 2022 (from 2013 to 2018 corneal transplantations were legally forbidden) were reviewed retrospectively.

Results

Data were available for 162 grafts of 140 patients in the study period, including 99 optical penetrating keratoplasty (PKP), 3 rotational penetrating keratoplasty (rotational PKP), 33 therapeutic/tectonic PKPs, 3 deep anterior lamellar keratoplasty, 21 Descemet's stripping endothelial keratoplasty (DSEK), 1 Descemet's membrane endothelial keratoplasty, 1 Thick endothelial keratoplasty, 1 Epikeratoplasty.

The most common indication was aphakic/pseudophakic bullous keratopathy (n=45, 27.8%), followed by keratoconus (n=36, 22.2%), failed grafts (n=20, 12.3%), corneal opacity and scars (n=19, 11.7%), infectious corneal ulcers (n=14, 8.6%), %), non-infectious corneal perforations (n=10, 6.2%), Fuch's endothelial dystrophy (n=6, 3.7%), corneal stromal dystrophies (n=6, 3.7). Others includes keratoglobus, descemetocele and Peter's syndrome.

Conclusion

Aphakic and pseudophakic bullous keratopathy was the most common indication, PKP was the most prevalent technique used for corneal transplantation. The prevalence of PKP is mostly due to lack of eye bank and corneal tissue deficiency in Azerbaijan.

CATARACT IN MIDDLE-AGED PEOPLE IN THE POST-COVID PERIOD

Rizaeva Manzurakhon Asrorovna
Center for the development of professional qualification of medical workers, Tashkent, Uzbekistan.

Relevance of the theme

The pandemic of a coronavirus infection caused by a new strain of SARS-CoV-2 has led to long-term health consequences. Such main manifestations of COVID-19 as fever, cough, myalgia, headache, sore throat are described, which in acute cases can progress to acute respiratory distress syndrome, "cytokine storm" and multiple organ failure up to death. Recent meta-analytical studies have shown that the prevalence of eye symptoms reaches 5%, with 28% of them appearing even without any systemic signs of COVID-19.

Materials and methods

The study included 33 patients (33 eyes) operated on for cataracts in the period from 2020 to 2021 at the Republican Clinical Ophthalmological Hospital, aged 25 to 50 years, 21 of them are men and 12 are women.

Research results

When collecting anamnesis, it was revealed: Hypertension in 8 patients, chronic cholecystitis - in 2, anemia - in 3, diabetes mellitus - in 7, chronic bronchitis - in 1, vegetovascular dystonia - in 1, coronary heart disease, metabolic syndrome - in 1, chronic rheumatism - in 1, neurocirculatory dystonia - in 2, rheumatoid arthritis, obesity - in 2.

During the treatment of COVID-19, 18 patients received corticosteroid drugs, the rest did not. The timing of cataract development in the post-COVID period was as follows: from 1 to 2 months in 3 patients, up to 3 months in 16 patients, and from 4 months in 13 patients (Table 1).

The study of visual acuity (VA) revealed the following pattern: VA from 0.01 to 0.1 in 29 patients, from 0.2 to 0.4 in 4 patients.

Bio-microscopy revealed lens opacities in the subcapsular and cortical layers in all patients. All patients underwent cataract phacoemulsification with IOL implantation. The operation went without complications.

Conclusions

1. Cataract in middle-aged people in the post-COVID period developed with concomitant diseases such as hypertension and diabetes mellitus in the period from 3 to 6 months.
2. Corticosteroid therapy aggravated the development of cataracts in 65% of cases.
3. Opacification of the lens in the post- COVID period was mainly observed in the cortical layers.

DYNAMICS OF INTROCULAR PRESSURE AFTER VITRECTOMY WITH RETINECTOMY IN PATIENTS WITH PROLIFERATIVE DIABETIC RETINOPATHY

Gunay Rustambayova, Mushfiq Kerimov
National Centre of Ophthalmology named after acad. Zarifa Alieva, Baku, Azerbaijan

Introduction

The hypotensive effect of retinectomy has long been known. For the first time, retinectomy as a surgical treatment for refractory glaucoma was proposed by Kirchhof in 1994.We have suggested that retinectomy reduces IOP in the postoperative period in patients with proliferative diabetic retinopathy, compared with those who have not performed retinectomy.

Purpose – to determine the dynamics of changes in intraocular pressure after vitrectomy with retinectomy in patients with proliferative diabetic retinopathy.

Material and methods

The study was conducted on 14 patients (14 eyes) with proliferative diabetic retinopathy who underwent pars plana vitrectomy with retinectomy, endolasercoagulation of the retina and silicone oil tamponade. The control group consisted of 16 patients (16 eyes) with proliferative diabetic retinopathy who had pars plana vitrectomy with a membranectomy but without retinectomy, and silicone oil tamponade.

Results

In the group with retinectomy stable normal IOP was observed during 2 years of postoperative observation. Only in two eyes, a slight increase in IOP (>20 mm Hg) was observed 12 months after vitrectomy, however, it was reduced by using 0.5% timolol. In the control group, an increase in IOP of > 5 mm Hg was observed in 12 of 16 patients. With the increase in the tamponade period, an increase in IOP was observed. A persistent increase in IOP above 30 mm Hg was observed in 4 out of 16 patients (25%).

Conclusion

Based on the study, it can be assumed that retinectomy, performed during vitrectomy for traction retinal detachment, contributes to the long-term preservation of normal intraocular pressure in the postoperative period.

RARE COMPLICATION AFTER LASIK SURGERY- CASE REPORT

Narmin Safarova
"Sumgayit Eye Hospital"

Introduction

Traumatic dislocation of laser-assisted in situ keratomileusis (LASIK) corneal flaps is an uncommon postoperative complication that could occur any time after LASIK, and could be visually devastating. We evaluated the visual outcomes, corneal sensation, tear function, and dry eye questionnaire results of patients with traumatic dislocation of LASIK flaps.

Material and ethods

This is a retrospective case report. Patient who were diagnosed with traumatic displacement of the LASIK flap and underwent flap replacement surgery and followed- up during April 2022 and September 2022. During this period following investigations were performed like Patient's visual acuity, refraction, corneal sensitivity, non-invasive tear

breakup time (NIBUT) results, and corneal slit lamp examination were evaluated.

Results

The patient's age was 42 years, and was female. The mean preoperative and postoperative six-month corrected distance visual acuity (CDVA) were OD=0.7; OS=1.0 respectively. The refractive data showed improvement. The corneal flap was clear and well-positioned at the final follow-up of the patients showed decreased corneal sensation in the right eye. Interocular OSDI discrepancy was less in those whose last visit was more than 6 months after the trauma.

Conclusions

Postoperative CDVAat six months was improved, and the refractive data also showed some improvement. The corneal nerve and tear function recovery peaked before 4 months, while the OSDI continued to show a strong trend of improvement beyond 6 months. The patient's follow-up is continuous. Last meeting with patient was on September 29.

BROWN SYNDROME: A REPORT ON A RARE STRABIS

Saidalieva Nodira Mahamatovna
Center for the development of professional qualification of medical workers, Tashkent, Uzbekistan.

Introduction

Brown syndrome (BS) is characterized by limited active and passive elevation of the affected eye during adduction. Patients with BS may experience expansion of the palpebral fissure during adduction, divergence when looking up, hypotropia in the initial position, disfiguring descent (antiaversion) during adduction.

Methodology and Materials

Case study A 5-year-old female patient with congenital Brown's syndrome. In the anamnesis, the first child in the family was born prematurely, in 7th month of pregnancy. The pregnancy was difficult, with toxicosis. No diseases associated with visual function were

observed in the family. On examination, visual acuity was 1.0 in both eyes. External examination without features. In the study of motility, a limitation of lifting and adduction of the right eye was found. During adduction, antiaveration of the right eye was observed. Forced position of the head. The left eye without pathological changes.

Myectomy of the superior oblique muscle on the right was performed operatively. During the operation, a positive traction test was recorded. After the operation on the third day, anti-avertia during adduction, lifting and adduction restriction was not observed, the movement of the eyeballs in full. A month later, the function of the antagonist of the superior oblique muscle in the form of the inferior oblique muscle increased, and a second-degree aversion appeared with hypertropia of 10 degrees. After three months, aversion remained in the third degree. Six months after the first operation, a second surgical intervention was performed - anterior transposition of the inferior oblique muscle. After the operation, there is no averation and hypertropia, the movement of the eyeballs in full from both sides.

Conclusion

Brown's syndrome can be caused by traumatic, neoplastic, infectious, autoimmune, inflammatory, and iatrogenic processes.

Despite the rare distribution and relatively favorable course, the syndrome causes a significant deterioration in the quality of life and can lead to irreversible visual impairment in the future.

OPTIMALIZATION OF CATARACT SURGERY AT THE BACKGROUND OF THE PSEVDOEXFOLIATIVE SYNDROME AND WEAKNESS OF CAPSULE- LIGAMENTOUS APPARATUS

Gunel Sailova

Shirvan City Medical-Diagnostic Centre, Azerbaijan

İntroduction

Pseudoexfoliative syndrome (PES) – both complicates cataract surgery and increases the risk of cataracts. The syndrome is mainly found in patients over 50 years of age and the frequency increases every ten

years. The incidence of the syndrome in patients over 60 years of age reaches 10-40%.

Purpose – according to the stage of development of PES it is necessary to determine the degree of weakness of the capsule-ligamentous apparatus during cataract surgery, to prevent and plan for complications during surgery and long-term postoperative observations.

Materials and methods

The study included preoperative, intraoperative and postoperative examinations of 165 patients aged 49 years and older who were diagnosed with cataracts and operated on for this reason. Of these 15(9.1%) were of control group, 150(90.9%) patients were diagnosed with PES during ophthalmological examination. Determination of visual acuity, contactless tonometry, two-stage bio microscopy, perimetry, ophthalmoscopy, ultrasonic biomicroscopy (Accutom UBM plus apparatus, USA). During biomicroscopy PES was studied in all cases according to the degree of clinical development, and then according to the indicators of UBM.

Results

Of the leading eyes 80(53.3%) were right eyes and 70(46.7%) were left eyes. PES syndrome was not detected in 15(9.1%) patients in the control group, 150(90.9%) in the leading eye PES syndrome was detected at different stages. PES in the eye was detected in the second stage, 38(25.3%) in the third stage. In 3% of eye ultrasound phacoemulsification + antiglaucomatous sinustrabekulectomy operations were performed. During the operation 27(18.0%) capsule stretch rings were implanted in to the eyes based on the results of UBM of the eyes detected in stage III of PES syndrome. Of the III stage eyes 35(23.3%) three-part acrylic lenses (AMO sensory IOL) and 3(2.0%) iris claw lenses were implanted in the retropupillary area. Repeated examinations in 6 months, 1 year and 4 years after surgery revealed no significant nausea in 109(72.7%) secondary posterior capsule cataracts and in 41(27.3%) secondary cataracts that reduced vision.

Conclusion

Thus, the development of a number of measures aimed at optimizing cataract surgery with PES and reducing complications can be considered

a confirmation of the relevance of interest in this syndrome. Each of the methods aimed at preventing complications during cataract surgery accompanied by PES, has its own tactics, technical difficulties and requires high professionalism from the surgeon. Cataract surgery with PES is still actual with possible intraoperative and postoperative complications.

THE USE OF ANTI-VEGF TREATMENT OF AGGRESSIVE FORMS OF RETINOPATHY OF PREMATURITY IN THE CAPITAL OF KAZAKHSTAN, NUR-SULTAN CITY. FIRST YEAR RESULTS.

Dinara Saukenova
Corporate Fund «University Medical Center» National Research Center for Maternal and Child Health, Nur-Sultan, Kazakhstan.

RETINOPATHY OF PREMATURE (ROP) – is a disease of the eyes of premature babies, which in the focus of attention of ophthalmologists all over the world. Aggressive retinopathy of prematurity (A-ROP) is the most severe, unfavorable, rapidly progressive, and fulminant form of retinal disease in preterm infants. The main risk group for A-RH is children born with very low and extremely low birth weight.

According to the World Health Organization (WHO), there are 15000000 babies born prematurely in the world, and this number is growing every year.

In Kazakhstan nursing newborns with body weight from 500 g and gestational age - 22 weeks. More than 21,000 premature babies are born per year in Kazakhstan, including 19% of children weighing up to 1,000 grams. On average, 2,000 premature babies are born in Nur-Sultan, of which 22% are children weighing less than 1,500 grams. According to statistics 38 % of premature babies develop ROP in Kazakhstan

According to the current protocol for the treatment of ROP, the only treatment for A-ROP is laser photocoagulation. However, a different

method of treatment is used in the world - intravitreal anti-VEGF injections

From October 2021, on the National Research Center for Maternal and Child Health of UMC Corporate Fund, the decision of the Medical Council allowed the use of anti-VEGF treatment of aggressive forms of ROP.

The report presents the results of the first year of the use of anti-VEGF treatment of aggressive forms of ROP

EFFICACY OF PRK+CXL IN CORRECTING AMETROPIA IN STABLE PRIMARY KERATOECTASIAS

Serdarova Sh.A.
Turkmenistan

Keratoconus (KC) and the second most common pellucid marginal corneal degeneration (PMD) is an important problem in ophthalmology, since the disease most often occurs in adolescence, especially in young able-bodied people and often leads to blindness and visual impairment. Currently, a new method of corneal collagen crosslinking (CXL) has been introduced in the treatment of these pathologies. It affects the collagen bonds of the cornea and strengthens it, but has little effect on ametropia. In recent years, a number of correction methods have been proposed in combination with CXL, the most effective of which is photorefractive keratectomy (PRK) + CXL.

Purpose

To study the effectiveness of PRK+ CXL in the correction of ametropia in stable primary keratoectasias and to evaluate this type of surgery.

Materials and methods. The study evaluated the effectiveness of the operation in 101 patients (126 eyes) with non-progressive disease with stable refraction, who were followed up for two years. According to the Amsler classification, 69 eyes with grade I-II CK belonged to group I, and group II consisted of 57 eyes with a cornea thickness >500 µm and a refractive mean spherical equivalent of 4.50 D. In addition to general studies, all patients underwent special methods

screening, including keratotopography, ultrasound pachymetry, as well as computer aberometry and pentacamometry. Anterior optical coherence tomography was performed. The patients were examined 3 days, 1 month, 3 months, 6 months, 1 year after the operation. The CXL procedure was carried out on the Italian equipment "CSO" with the PRK operation. PRK was performed using a SCHWIND AMARIS 500 excimer laser. When analyzing the composition of refractory pathology, it was found that complex myopic astigmatism 85.21% accounted for the most part, of which the frequency of low-grade myopic astigmatism was 41.81%, the frequency of moderate myopic astigmatism - 43.4%, mixed astigmatism - 14.79%, correction was carried out. Postoperative monitoring was carried out according to the standard scheme.

Conclusions

Epithelialization was completed in 72% of patients within 3 days after surgery, and in the remaining patients within 5 days after surgery. Early hayes were detected in all patients. Heich was more common in patients with CC than with PMD. In 28% of patients, hayes reached II-III points. In 75% of patients, the haze persisted for three months, 19% for six months, and 6% for 1 year. This phenomenon is associated with the formation of a demarcation ring in the stroma. The keratometric index showed a decrease of 6.0 diopters in both groups with an average value of 3.7 diopters ± 1.5 diopters. The greatest visual acuity before surgery increased by an average of 0.2±0.25, after a year by an average of 0.75-0.93 in both groups. Refractive results have been associated with hayes. Within 1 year after the operation, in 35% of patients of group I, the refractive index was ±0.50 diopters from the target refraction and ±0.75 diopters from the target refraction of 59%. In group II, 65% of patients had a refractive index of ±0.35 diopters within 1 year after surgery, and 35% had ±0.50 diopters of the target refraction within 1 year after surgery. The disease did not progress in any of the patients, and at the same time, CXL and correction of ametropia made it possible to achieve the expected result. We did not find any significant complications in the postoperative period.

ANOMALIES IN THE DEVELOPMENT AND EYEBALL MUSCLES ATTACHMENT, CONTRIBUTING TO THE STRABISMUS AND ABNORMAL HEAD POSITION

Shahla Asadova

Azerbaijan State Institute of Postgraduate Education named after A.Aliev Baku, Department of Ophthalmology

Introduction

There are many causes of strabismus development. It is refractive, accommodative, paralytic, restrictive, posttraumatic strabismus associated with the eye development pathology, eye diseases, muscles anomalies, innervation etc. In our case the cause of strabismus were the anomalies of development and anomalies of muscles attachment.

Purpose – determination of the tactics of surgical treatment of strabismus associated with anomalies in the development and attachment of muscles.

Material and methods

We examined 10 patients with this pathology. All patients were operated on. In 3 patients the cause of strabismus was anomaly of development with change of muscles width, in 7 patients - anomalies of muscles attachment contributing to the eye movement disorders and strabismus. All patients had an abnormal head position with the chin tilted to one side or another, which they used to compensate for diplopia.

Results

During the observation period (1-48 months) all patients had ortophoria with restoration of eyeball movements, correction of the head position, absence of diplopia, in some cases there was an increase vision with the improving of binocular vision.

Conclusions

Restoring the position of muscles contributes to the correction of strabismus and abnormal head position.

MYOPIA PROGRESSION IN SCHOOL-AGED PATIENTS DURING THE COVID-19 PANDEMIC

Mariyat Sultanova, Aynur Agaeva
Azerbaijan State Advanced Training Institute for Doctors named after A.Aliyev, Department of Ophthalmology

Introduction

Myopia of school age is an actual problem all over the world. An important role in the development and progression of pathology is played by the widespread use of smartphones and computer equipment.

Purpose – to evaluate the impact of online education on the development and progression of myopia in school-age patients.

Materials and methods

Outpatient records of 500 children aged 8-15 years who applied to the National Centre of Ophthalmology named after acad. Zarifa Aliyeva were retrospectively analyzed. Patients were divided into 2 groups similar in gender and age. The first group included 250 somatically healthy children under observation in the period 2018-2019, the second group included 250 patients who underwent examinations during the COVID-19 pandemic and total online learning (2020-2021). Patients of the second group spent an average of 6 hours (4-8 hours) per day in front of a digital device. All patients underwent routine ophthalmological examinations, and a diagnosis of myopia was made.

Results

Patients of the first group had a later onset of myopia compared with patients of the second group. In 15% of children in group 1 and in 28% of patients in group 2, myopia progressed by more than 1 diopter per year during the indicated observation period. There was no correlation between the development of pathology and gender. City dwellers are subject to myopia of school age more often than those living in the regions of the republic.

Conclusion

Use of computers and smartphones during online learning is the cause of the progression of myopia in school-age children.

POSTERIOR LENS DISLOCATIONS

Prof. Dr. Ozgur Yalcinbayir
Uludag University Department of Ophthalmology, Bursa, Turkey

Summary

Posterior lens dislocations are a rare condition resulting from a variety of congenital and acquired risk factors. Direct or indirect damage to the zonulo-capsular complex can cause the crystalline lens or intraocular lens (IOL) to shift into the vitreous space. Various techniques have been developed in recent years for the surgical rehabilitation of posterior lens dislocations.

In past years, the potential risks of corneal endothelial cell loss with the use of anterior chamber IOLs have led surgeons to prefer iris-fixed and sclerally-fixed IOLs. To date, fixation of IOLs with scleral sutures has been the most common procedure in this regard. Various modifications of this technique have been proposed and used in combination with pars plana vitrectomy (PPV). However, some disadvantages and complications have accelerated the search for innovative techniques. Various sutureless intrascleral fixation techniques have been reported in recent years.

In this presentation, different secondary IOL implantation techniques in combination with PPV for rehabilitation of posterior lens dislocations will be presented and discussed.


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