



KNJIGA SAŽETAKA

**KONGRES
HRVATSKOG
OFTALMOLOŠKOG
I OPTOMETRIJSKOG
DRUŠTVA**

Zagreb
09. - 11. rujna 2021.

1. Ajla Pidro

Naslov:

Fotothermalna stimulacija kao tretman centralne serozne retinopatije

Autori:

Ajla Pidro, Mirko Ratković

Ustanova:

Poliklinika Anda

Cilj:

Prezentirati fotothermalnu stimulaciju makule kao mogućnost liječenja u bolesnika s nekroničnom centralnom seroznom korioretinopatijom (CSCR).

Bolesnici i metode:

Dva slučaja centralne serozne retinopatije koja su tretirana fotothermalnom stimulacijom, sa različitim nivoom subretinalne tekućine i pada u vidnoj oštrini.

Rezultati:

Prvi slučaj tretiran je korisničkim sučeljem EndPoint Management® (Pascal, Topcon Medical Laser Systems, Santa Clara, CA, SAD): 35-godišnjem muškarcu bez anamneze drugih sistemskih bolesti dijagnosticiran je CSCR na lijevom oku tri tjedna. BCVA je bio pokret ruke i iznenađujuće se poboljšao na 0,90 nakon 7 dana i ostao je stabilan 2 godine nakon tretmana. Područje je tretirano s ukupno 410 pečata, uzorak 4x4, vrijeme obrade 3 minute, intenzitet 120 mW, veličina pečata 200 mikrona s intervalom od 0,25, izloženost 15 ms, EpM 30%.

Drugi slučaj liječen je mikropulsnim laserom (MicroPulse IQ577, IRIDEX Corporation, Mountain View, CA, SAD). 32-

godišnjem muškarcu bez anamneze drugih sistemskih bolesti dijagnosticiran je CSCR na desnom oku. Područje je tretirano s ukupno 550 pečata uzorka 5x5, vrijeme obrade 5 minuta, intenzitet 220 mW, veličina brtve 200 mikrona bez raspona, izloženost od 20 ms, radni cycle 5%. BCVA je bila 0,7, nakon 3 tjedna BCVA je bila 0,9 i ostala je stabilna 2 godine nakon tretmana.

Zaključak:

Korisničko sučelje Pascal EndPoint i MicroPuls Iridex, mogu biti sigurno, učinkovito i stabilno rješenje za nekroničnu formu CSCR.

Title:

Photothermal Stimulation for Treatment of Central Serous Retinopathy

Authors:

Ajla Pidro, Mirko Ratković

Institution:

Poliklinika Anda

Aim:

Present photothermal macular stimulation as a treatment option in patients with necrotic central serous chorioretinopathy (CSCR).

Patients and methods:

Two cases of central serous retinopathy treated with photothermal stimulation, with different levels of subretinal fluid and a decrease in visual acuity.

Results:

The first case was treated with EndPoint Menagment ® user interface (Pascal, Topcon Medical Laser Systems, Santa Clara, CA, USA): The area was treated with a total of 410 seals 4x4 sample, treatment time of 3 minutes, intensity 120 mW, seal size 200 microns with at 0.25 interval, 15 ms exposure, EpM 30%.

A 35-year-

old man with history of no other systemic diseases was diagnosed with CSCR on left eye for 3 weeks. BCVA was arm movement and surprisingly improved to 0.90 after 7 days and remained stable for 2 years months after treatment.

The second case was treated with a micropulse laser (MicroPulse IQ577, IRIDEX Corporation, Mountain View, CA, The USA). A 32-year-

old man with history of no other systemic diseases, was diagnosed with CSCR on right eye. The area was treated with a total of 550 seals 5x5 sample, treatment time of 5 minutes, intensity 220 mW, seal size 200 microns without span, exposure of 20 ms, duty cycle 5%. BCVA was 0.7, after 3 weeks BCVA was 0.9, and remained stable for 2 years after treatment.

Conclusion:

The user interface Pascal EndPoint and MicroPuls Iridex can be a safe, efficient and stable solution for the non-chronic form of CSCR.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA MREŽNICU / Retina section

Titula / Title:

Dr.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Ajla

Ime i prezime / First and Last Name:-Last

Pidro

2. Ana Pupić-Bakrač

Naslov:

OKULARNA DIROFILARIJAZA UZROKOVANA OBLIĆEM D. REPENS: OFTALMOLOŠKE I SISTEMSKE MANIFESTACIJE

Autori:

Ana Pupić-Bakrač¹, Tomislav Jukić², Relja Beck³

Ustanova:

¹Odjel oftalmologije, Opća bolnica Zadar ²Klinika za Očne bolesti, Klinički bolnički centar Zagreb
³Odjel za bakteriologiju i parazitologiju, Hrvatski veterinarski institut

Cilj:

Dirofilaria repens je vektorski, filaroidni oblič koji se nalazi kod mesoždera, prvenstveno pripito mljenih pasa. Ljudi se smatraju slučajnim domaćinima kod kojih *D. repens* rijetko doseže spoln u zrelost, ali može izazvati lokalnu upalu, uglavnom u okularnim i potkožnim tkivima. *D. repens* mikrofilarije rijetko se nalaze u perifernoj krvi kod ljudi. Svrha ovog istraživanja bila je napraviti pregled svih objavljenih slučajeva okularne dirofilarijaze u Republici Hrvatskoj. Pored toga, prov eli smo pregled svjetske literature o sistemskim infekcijama s *D. repens* koje proizvode mikrofil arije.

Bolesnici i metode:

U nacionalnom istraživanju, analizirano je 30 objavljenih slučajeva humane dirofilarijaze u Repu blici Hrvatskoj. Potom je provedena meta-analiza svjetske literature te je pronađen 21 slučaj infekcije čovjeka spolno zrelim *D. repens* koje proizvode mikrofilarije.

Rezultati:

Od 1996. godine, u Republici Hrvatskoj je objavljeno 12 slučajeva okularne dirofilarijaze. Na tem elju anatomskog položaja, subkonjunktivni prostor, vjeđe i suzna žlijezda bila su najčešće zahva ćena tkiva. Svi bolesnici su uspješno izliječeni kirurškom ekstirpacijom. Konačna dijagnoza posta vljena je nakon morfološke (mikroskopija) i molekularne (PCR) identifikacije *D. repens*. Pregledom svjetske literature, pronađeno je još šest slučajeva *D. repens* mikrofilarijaze s primar nim anatomskim sijelom odraslog crva u okularnim tkivima. *D. repens* mikrofilarije su otkrivene u lokalnim tkivima (lokalna mikrofilarijaza) i perifernoj krvi (mikrofilaremija) u po tri slučaja. Lije čenje kirurškom ekstirpacijom odrasle *D. repens* provedeno je u svih šest slučajeva, a u četiri sl učaja primijenjeni su lijekovi, antiparazitski lijekovi u četiri slučaja i antibiotici u jednom slučaju.

Zaključak:

Republika Hrvatska predstavlja endemsko područje za *D. repens*. Ljudi mogu biti konačni doma ćin *D. repens*.

Title:

OCULAR DIROFILARIASIS CAUSED BY DIROFILARIA REPENS: OPHTHALMIC AND SYSTEMIC MANIF ESTATIONS

Authors:

Ana Pupić-Bakrač¹, Tomislav Jukić², Relja Beck³

Institution:

¹Department of Ophthalmology, General Hospital Zadar ²Department of Ophthalmology, University Hospital Center Zagreb ³Department for Bacteriology and Parasitology, Croatian Veterinary Institute

Aim:

Dirofilaria repens is a vector-borne filaroid helminth of carnivorous animals, primarily domesticated dogs. Humans are considered to be accidental hosts in which *D. repens* rarely reach sexual maturity but induce local inflammation, mainly in ocular and subcutaneous tissues. *D. repens* microfilariae circulating in peripheral blood have been detected in humans only rarely. The purpose of this study was to make an overview of all published cases of ocular dirofilariasis in Croatia. Additionally, we conducted review of the world literature on systemic infection with *D. repens* producing microfilariae.

Patients and methods:

In a nationwide investigation, 30 published cases of human dirofilariasis in Croatia were analysed. A subsequent meta-analysis of the world literature identified 21 cases of human infection with adult *D. repens* producing microfilariae.

Results:

Since 1996, 12 cases of ocular dirofilariasis were reported in Croatia. Based on anatomical location, subconjunctival space, eyelids and lacrimal gland were the most frequently affected tissues, respectively. All cases were successfully treated with surgical extirpation. Final diagnosis was set after morphological (microscopy) and molecular (PCR) identification of *D. repens*.

By reviewing the world literature, additional six cases of *D. repens* microfilariasis with the primary anatomical site of adult worm in ocular tissues were identified. *D. repens* microfilariae were detected in the local tissues (local microfilariasis) and the peripheral blood (microfilaremia) in three cases each. Treatment with surgical extirpation of adult *D. repens* was performed in all six cases and medications were administered in four cases, the latter consisting of antiparasitic drugs in four cases and antibiotics in one case.

Conclusion:

Croatia represents endemic area for *D. repens*. Humans may act as a final host for *D. repens*.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU MLADI U OFTALMOLOGIJI / Young Ophthalmologist Section

Titula / Title:

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Ana

Ime i prezime / First and Last Name:-Last

Pupić-Bakrač

3. Marija Barišić Kutija

Naslov:

Primjena lokalne kortikosteroidne terapije u bolesnika s uveitisom u sklopu juvenilnog idiopatskog artritisa na sistemskoj imunomodularnoj terapiji- longitudinalna opservacijska studija

Autori:

Marija Barišić Kutija, Nenad Vukojević, Sanja Perić, Petra Kristina Lozo, Martina Galiot

Ustanova:

Klinički bolnički centar Zagreb

Cilj:

Cilj istraživanja bio je procijeniti učinkovitost imunomodularne terapije (IMT) u kontroli intraokularne upale u bolesnika s uveitisom u sklopu juvenilnog idiopatskog artritisa (JIA-U) i njen potencijal smanjenja potrebe za primjenom lokalnih kortikosteroida (LKS)

Bolesnici i metode:

Provedeno je longitudinalno opservacijsko istraživanje u koje smo uključili 38 bolesnika (69 oči) s JIA-

U od 2 do 15 godina, koji su primali i IMT i LKS. Iz baze podataka Klinike za očne bolesti Kliničkog bolničkog centra Zagreb prikupljeni su podaci o tijeku liječenja. Medijan praćenja bio je 4,4 god. Pomoću generaliziranih linearnih modela analizirani su podaci o kretanju dnevnih doza LKS-a i stupnja upale u prednjoj očnoj sobici (POS) te združenost upotrebe IMT-a s potrebnom dozom LKS-a.

Rezultati:

U našem istraživanju prikazan je jasni trend smanjenja broja doza LKS-a i smanjenje stupnja upale u POS-u tijekom vremena kod JIA-U uz primjenu IMT-a. Broj dnevnih doza LKS-a kod JIA-

U uz IMT na kraju praćenja je statistički značajno manji u odnosu na broj doza na početku praćenja. Liječenje biološkim lijekovima, ali ne i metotreksatom (MTX), nezavisno je združeno sa smanjenom potrebom za LKS-om, nižim stupnjem upale u POS-u i smanjenjem rizika nastanka katarakte.

Zaključak:

Uvođenje biološke sistemne IMT za liječenje JIA-U-a pokazuje kortikosteroid-štedeći potencijal te pozitivan utjecaj na tijek JIA-U-a.

Title:

The use of topical glucocorticoid therapy in patients with juvenile idiopathic arthritis-associated uveitis on systemic immunomodulatory therapy - longitudinal observational study

Authors:

Marija Barišić Kutija, Nenad Vukojević, Sanja Perić, Petra Kristina Lozo, Martina Galiot

Institution:

University Hospital Centre Zagreb

Aim:

The aim of this research was to determine the influence of systemic immunomodulatory therapy on the intraocular inflammation control and the need for topical glucocorticoid therapy (TGC) in patients with juvenile idiopathic arthritis-associated uveitis (JIA-U).

Patients and methods:

We have conducted longitudinal observational study in which we included 38 JIA-U patients in whom systemic immunomodulatory treatment (IMT: biologics and/or MTX) was introduced. The data about the number of cells in the anterior chamber (AC) about TGC and systemic therapy were collected on each examination. Generalized linear mixed models were used to analyze the relationships between treatment with biologics, MTX, TGC and the grade of inflammation in anterior chamber according to SUN criteria.

Results:

Statistically significant difference in the daily doses of TGC could be seen from the 12th month after application of systemic IMT. The number of daily doses of TGC per eye as well as the degree of inflammation in AC per eye decreased over time. Using generalized linear mixed models it was shown that the treatment with biologics, but not with MTX and systemic glucocorticoids, was associated with lower intensity of TGC therapy.

Conclusion:

The results showed that the application of systemic biological therapy may result in less intensive TGC therapy, resulting in glucocorticoid-sparing potential, and reducing intraocular inflammation.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA PEDIJATRIJSKU OFTALMOLOGIJU I STRABIZAM / Pediatric Ophthalmology and Strabismus section

Titula / Title:

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Marija

Ime i prezime / First and Last Name:-Last

Barišić Kutija

4. Skelin Ljubica

Naslov:

ANGIOID STREAKS: PRIKAZ SLUČAJA

Autori:

Skelin Lj., Siničić A.

Ustanova:

KBC Split

Cilj:

Prikazati slučaj pacijenta s dijagnozom pseudoxanthoma elasticum uz pojavu CNV koja je liječen a sa intravitrealnom anti-VEGF terapijom, naglašavajući njegove glavne kliničke značajke i važnost rane dijagnoze poremećaja, s ciljem primjerenog terapijskog zbrinjavanja pridruženih komplikacija.

Bolesnici i metode:

Pacijent u dobi od 37 godina se javlja na pregled zbog naglog pada vida na lijevo oko, uz pojavu metamorfopsije, neposredno nakon vježbanja. Nije imao prethodne oftalmološke bolesti ni operacije. Prilikom oftalmološkog pregleda utvrđena vidna oštrina lijevog oka je iznosila 0,08 s korekcijom, a desnog oka 0,9 s korekcijom. Pregled prednjeg segmenta bio je uredan na oba oka. Detaljni pregled očne pozadine oba oka pokazao je angioid streaks, a u području makule lijevog oka i CNV, što je potvrđeno na OCT i FAG pretragama. Na koži vrata pacijenta su pronađene žućkaste papule, te je uzet uzorak za patohistološku analizu. Anamnestički smo saznali da su mu umrle obje sestre od nagle srčane smrti, jedna u dobi od 10 godina, a druga od 26 godina. Pregledan je od strane kardiologa i genetičara. Dan nakon prijema na Kliniku pacijent je primio antiVEGF terapiju u lijevo oko (CNV). Nakon prve injekcije, pacijent je pregledan jedan put mjesečno. Dodatna antiVEGF terapija je primjenjena kad bi se otkrila sub/Intraretinalna tekućina na OCT-u, curenje na FAG-u ili kad bi se detektirao pad vida na lijevo oko. Unutar 13 mjeseci, tri injekcije antiVEGF terapije su date u lijevo oko.

Rezultati:

Nalazom biopsije kožnih promjena potvrđena je dijagnoza pseudoxanthoma elasticum. Metodom sekvenciranja i delecijско/duplikacijskom analizom kod pacijenta je dokazana bijela mutacija u genu ABCC6, koja se nalazi kod bolesnika s Pseudoxanthoma elasticum. Kardiovaskularnim pregledom se nije utvrdila patologija, a nalaz EKG i UZV srca su bili normalni. Zadnjim pregledom se utvrdila vidna oštrina lijevog oka 0,1 uz korekciju, te nije bilo simptoma ni znakova CNV.

Zaključak:

U ovom slučaju naši rezultati pokazuju da antiVEGF terapija može biti korisna za liječenje CNV kao posljedica angioid streaks. Pacijentova vidna oštrina i nalazi pozadine oka su mirne u periodu od 13 mjeseci praćenja.

Unatoč rijetkosti ove patologije, potrebno je biti svjestan potrebe za ranom dijagnostikom, prepoznavanjem tipičnih kožnih manifestacija bolesti, pregledom očne pozadine, u svrhu odgovaraj

ućeđ lijećenja i boljim zbrinjavanjem pridruženih komplikacija kada su one prisutne, čineći redovite oftalmološke i kardiovaskularne kontrole i praćenja.

Title:

ANGIOID STREAKS: CASE REPORT

Authors:

Skelin Lj., Siničić A.

Institution:

KBC Split

Aim:

To present a case of a patient diagnosed with pseudoxanthoma elasticum with the appearance of CNV treated with intravitreal anti-VEGF therapy, emphasizing its main clinical features and the importance of early diagnosis of the disorder, with the aim of appropriate therapeutic management of associated complications

Patients and methods:

A 37-year-old man patient presented with significant visual loss in his left eye and the occurrence of metamorphopsia, immediately after exercise. Past ocular history was unremarkable for any previous eye complaint or surgery. Best-corrected visual acuity was 0,9 in the right eye and 0,08 in the left eye. Anterior segment examination and intraocular pressure measurements were normal in both eyes. Detailed fundus examinations revealed bilateral angioid streaks and CNV in the area of the fovea in the left eye, which was confirmed by OCT and FAG. By examination of the neck, yellowish papules were found. Skin biopsy was taken and sent for histopathological examination. He has a family history of sudden death: his two older sisters died of cardiac death, at the age of 26 and 10. He was examined by a cardiologist and geneticist. The day after admission to the Clinic, the patient received anti-VEGF therapy in the left eye (CNV). After the first injection, the patient was called for monthly visits. Additional treatment was administered when the lesion showed subretinal-intraretinal fluid on OCT, leakage on FAG, or when decrease in visual acuity was detected. After a follow-up period of 13 months, three injections were administered to the left eye.

Results:

Histopathological examination of skin changes confirmed the diagnosis of pseudoxanthoma elasticum. A biallelic mutation in the ABCC6 gene, found in patients with pseudoxanthoma elasticum, has been demonstrated in this patient by sequencing and deletion/ duplication analysis. Cardiovascular evaluation did not identify changes and the electrocardiogram and echocardiogram were normal. The final examination revealed best-corrected visual acuity 0,1 in the left eye, and no signs nor findings of reactivation of CNV.

Conclusion:

Our result in this case indicates that anti-VEGF treatment can be useful for the CNV caused by AS. The visual and anatomical success was achieved and preserved during 13 months of follow-up period. Despite the rarity of this pathology, one must be aware of the need for early diagnosis and recognition of the typical cutaneous manifestations of the disease for adequate handling and better management of the associated complications when these are present. Periodical ophthalmologic and cardiovascular follow-ups are imperative.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU MLADI U OFTALMOLOGIJI / Young Ophthalmologist Section

Titula / Title:

Dr.

Specijalizant / Resident

Ime i prezime / First and Last Name:-First

Ljubica

Ime i prezime / First and Last Name:-Last

Skelin

5. Malenica Ravlić Maja

Naslov:

Retrospektivna analiza povezanosti diplopije i cijepljenja za prevenciju Covid 19

Autori:

Malenica Ravlić M, Škunca Herman J, Knežević L, Sušić E, Marić G, Vataavuk Z

Ustanova:

KBC Sestre milosrdnice

Cilj:

ispitati povezanost diplopije sa cjepivom protiv koronavirusa

Bolesnici i metode:

U studiju je uključeno 58 pacijenta (38 muškaraca i 20 žena) obrađivanih u tercijarnoj ustanovi u periodu od 01.07.2020.g. do 01.07.2021.g. s dijagnozom novootkrivene diplopije. Pacijente smo podijelili u dvije dobne grupe, od 18 do 65 godina starosti te iznad 65 godina starosti. Analizirani su neurološki i oftalmološki simptomi, ranije ustanovljeni komorbiditeti te učinjena neurološka obrada. Analizirani su pacijenti koji su primili cjepivo protiv koronavirusa. Naglasak ove studije je bila retrospektivna analiza pacijenata sa postavljenom dijagnozom dvoslika prema šifarniku HZZO te povezanost sa cjepivom covid 19 u tercijarnoj ustanovi. Isključujući kriteriji su bili ranije postavljene dijagnoze strabizama, distiroidne orbitopatije, monokularna diplopija.

Rezultati:

Retrospektivnom analizom 58 pacijenata sa diplopijom nađeno je da je njih 8 bilo cijepljeno prije pojave diplopije. Cjepivo AstraZeneca je korišteno kod 6 pacijenata, jedan pacijent je cijepljen sa BioNTech, Pfizer cjepivom te jedan pacijent sa ModernaTX, Inc. cjepivom protiv koronavirusa.

Šest pacijenata je bilo iznad 65 godina starosti, dva pacijenta dobi 18-65 godina starosti, od toga 5 muškaraca i 3 ženske osobe.

Klinički simptom diplopije najranije se javio deveti dan nakon cjepiva, a najkasnija pojavnost diplopije je bila 41. postvakcijijski dan. Svi ispitanici su imali simptom diplopije, troje je uz diplopiju imalo i nalaz ograničene bulbomotorike a kod jednog pacijenta se uz horizontalnu diplopiju uočio se i rotatorni nistagmus. Jedna ispitanica je uz diplopiju imala i nalaz obostrane ptoze gornjih vjeđa uz anizokoriju. Troje pacijenata imalo je parezu n. oculomotoriusa, dvoje parezu abducensa, dvoje nepoznatu neurooftalmološku dijagnozu te jedna ispitanica imala internuklearnu oftalmoplegiju. Svima je učinjena neuroradiološka obrada, snimanje CT i/ili MR mozga.

Petoro ispitanika imalo je pridružen bolesti (arterijska hipertenzija i šećerna bolest tip II), dok ih je troje bilo bez kroničnih sistemskih oboljenja.

U pet ispitanika došlo je do spontanog oporavka bez potrebe za liječenjem. Troje bolesnika je je dnakog statusa, među kojima dvoje bez liječenja te jedan je uz prevedenu medikamentoznu terapiju.

Zaključak:

Retrospektivnom analizom podataka naših ispitanika sa diplopijom uz povezanost sa cjepivom protiv korona virusa, diplopija je nađena kod njih 13,79%. Povezanost istih nije jasno definirana niti objašnjena. Dosadašnja literatura nije ukazala na povezanost diplopije sa cjepivom protiv koronavirusa te su potrebni daljnja analiza i praćenje kako bi se isključila druga etiologija diplopije.

Title:

Retrospective analysis of the association between diplopia and vaccination for prevention Covid 19

Authors:

Malenica Ravlić M, Škunca Herman J, Knežević L, Sušić E, Marić G, Vataavuk Z

Institution:

KBC Sestre milosrdnice

Aim:

to evaluate the association of diplopia with the coronavirus vaccine

Patients and methods:

The study included 58 patients (38 men and 20 women) treated in a tertiary institution in the period from 01.07.2020. to 01.07.2021. with a diagnosis of acute onset diplopia. We divided the patients into two age groups, from 18 to 65 years of age and over 65 years of age. Neurological and ophthalmological symptoms were analyzed, previously established comorbidities and neuroradiological processing were performed. Patients who received the coronavirus vaccine were analyzed. The focus of this study was a retrospective analysis of patients diagnosed with diplopia according to the HZZO codebook and the association with the covid 19 vaccine in a tertiary institution. The excluding criteria were previously diagnosed strabismus, thyroid eye disease and monocular diplopia.

Results:

A retrospective analysis of 58 patients with diplopia found that 8 of them had been vaccinated before the onset of diplopia. AstraZeneca was used in 6 patients, one patient was vaccinated with BioNTech, Pfizer vaccine and one patient with ModernaTX, Inc. coronavirus vaccine.

Six patients were over 65 years of age, two patients aged 18-65 years, of which 5 were men and 3 were women.

The clinical symptom of diplopia first appeared on the ninth day after vaccination, and the latest onset of diplopia was on the 41st post-

vaccinated day. All subjects had a symptom of diplopia, three had a finding of limited motility of the eye in addition to diplopia, and in one patient rotational nystagmus was observed in addition to horizontal diplopia. In addition to diplopia, one subject also had a finding of bilateral ptosis of the upper eyelids with anisocoria. Three patients had paresis n. oculomotorius, two paresis abducens, two unknown neuroophthalmological diagnosis and one subject had internuclear ophthalmoplegia. All underwent neuroradiological processing, CT and / or MRI of the brain.

Five subjects had an associated disease (arterial hypertension and type II diabetes), while three had no chronic systemic disease.

In five subjects, spontaneous recovery occurred without the need for treatment. Three patients have the same status, including two without treatment and one with medication therapy

Conclusion:

By retrospective analysis of the data of our patients with diplopia with association with the coronavirus vaccine, diplopia was found in 13.79% of them. Their association is not clearly defined

r explained. To date, the literature has not indicated a link between diplopia and the coronavirus vaccine, and further analysis and monitoring are needed to rule out another etiology of diplopia.

Kongres / Congresses:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA PEDIJATRIJSKU OFTALMOLOGIJU I STRABIZAM / Pediatric Ophthalmology and Strabismus section

Titula / Title:

Dr.

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Ime i prezime / First and Last Name:-First

Maja

Ime i prezime / First and Last Name:-Last

Malenica Ravlić

6. Šimić Tin

Naslov:

Prikaz slučaja: Očna mijaza - infestacija oka ovčjim štrkom

Autori:

T. Šimić, V. Markušić

Ustanova:

Klinika za oftalmologiju, Klinički bolnički centar Rijeka

Cilj:

Očna mijaza predstavlja infestaciju oka ili adneksa oka domaćina larvom. Ovčji štrk (*Oestrus ovis*) najčešći je uzročnik očne mijaze koji se prenosi s ovce na čovjeka. Obzirom na rijetku pojavu na našim prostorima, pretežito u ruralnim područjima, očna mijaza predstavlja dijagnostički izazov.

Bolesnici i metode:

Prikaz slučaja 64-

godišnje pacijentice obrađene na Klinici za oftalmologiju zbog konjuktivitisa lijevog oka. Pregledom na biomikroskopu i mikrobiološkom analizom potvrdi se infestacija oka Ovčjim štrkom.

Rezultati:

Biomikroskopskim pregledom kod pacijentice se prikažu 3 pokretne jedinke larve. Učini se uklonjenje larvi te se aplicira topička terapija, po primjeni terapije tegobe regradiraju. Larve se fotografiraju, pohrane u medij formaldehida te se upute na tipizaciju na Klinički zavod za mikrobiologiju. Potvrdi se prisutnost jedinki larvi Ovčjeg štrka (*Oestrus ovis*).

Zaključak:

Neprepoznata ili kasno dijagnosticirana infestacija predstavlja ugrozu za oko domaćina zbog mogućnosti razvitka upalnih procesa svih očnih ovojnica.

Title:

Case report: Ophthalmomyiasis - infestation of the eye with *Oestrus ovis*

Authors:

T Šimić, V Markušić

Institution:

Department of Ophthalmology, Clinical hospital Rijeka

Aim:

Ophthalmomyiasis is the infestation of the eye or ocular adnexa by larvae. Sheep blowfly (*Oestrus ovis*) which is found in most sheep communities is the most frequent cause of human ophthalmomyiasis. Even if the ophthalmomyiasis is commonly found in rural areas, its occurrence in Europe remains significantly low and as such ophthalmomyiasis represents a significant diagnostic challenge.

Patients and methods:

Case report of a 64-year-

old female patient presented at the Department of ophthalmology due to conjunctivitis affectin

g her left eye. After slit lamp exam and microbiological analysis, the infestation of the left eye by *Oestrus ovis* was confirmed.

Results:

Slit lamp exam of the left eye showed 3 motile larvae. The larvae were extracted, and topic therapy was given which resulted in symptom regression. Larvae samples were photo documented, stored in formaldehyde, and send to further typing to the Department of Microbiology. The presence of *Oestrus ovis* larvae was confirmed.

Conclusion:

Delayed or unrecognized infestation diagnosis represents a severe risk due to a possible evolution of an inflammatory responses that could cause ocular damage.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU MLADI U OFTALMOLOGIJI / Young Ophthalmologist Section

Titula / Title:

Dr.

Specijalizant / Resident

Ime i prezime / First and Last Name:-First

Tin

Ime i prezime / First and Last Name:-Last

Šimić

7. Lucija Krtalić

Naslov:

Prikaz slučaja: Dvoslike kao prvi simptom potencijalno životno ugrožavajućeg stanja

Autori:

Lucija Krtalić 1,2, Neda Striber 1, Barbara Dawidowsky 1, Mirjana Bjeloš 2,3,4, Mladen Bušić 2,3, 4

Ustanova:

1 Klinika za dječje bolesti Zagreb 2 Klinika za očne bolesti, Klinička bolnica „Sveti Duh“, Zagreb, 3 Medicinski fakultet Osijek, Fakultet za dentalnu medicinu i zdravstvo Osijek, Sveučilišta J.J. Strossmayera u Osijeku 4 Referentni centar Ministarstva zdravstva za dječju oftalmologiju i strabizam

Cilj:

Ukazati na važnost prepoznavanja znakovitosti novonastalih oftalmoloških simptoma s ciljem isključivanja potencijalno životno ugrožavajućih stanja, posebice u pacijenata podložnih malnutriciji.

Bolesnici i metode:

Jedanaestogodišnji dječak hospitaliziran je nakon prometne nesreće, a zbog zadobivenih ozljeda jetre i slezene te kontuzije gušterače učinjeni su višestruki operativni zahvati. Tijekom četvrtog tjedna hospitalizacije javlja dvoslike u svim smjerovima pogleda osim vertikalno. Nakon dva dana razvio je bilateralnu parezu lateralnog ravnog mišića. Ostali simptomi uključivali su vrtoglavicu u te glavobolju pri vertikalizaciji, mučninu te povraćanje. Stanje svijesti bilo je očuvano. Učinjeni laboratorijski testovi bili su unutar fizioloških vrijednosti te je indicirana MR mozga.

Rezultati:

MR mozga učinjena po pojavi simptoma pokazala je lezije donjih kolikula te medijalnih segmenata oba talamusa, a takav je nalaz zajedno s kliničkom slikom ukazivao na metaboličku encefalopatiju te je postavljena sumnja na Wernickeovu encefalopatiju. Primijenjena je terapija tiaminom u dozi od 100 mg intravenski. U kratkom periodu od primjene terapije došlo je do značajnog poboljšanja kliničkog stanja, a kontrolna MR učinjena 4 dana nakon primjene terapije pokazala je potpunu regresiju ranije opisanih lezija.

Zaključak:

Dvoslike kao simptom uvijek zahtijevaju sveobuhvatnu obradu pacijenta uz uključivanje MR dijagnostike jer mogu biti prvi simptom potencijalno životno ugrožavajućeg stanja, kao što je u ovom slučaju bila Wernickeova encefalopatija uzrokovana deficijencijom vitamina B1 (tiamina).

Title:

Case report: Diplopia as the first symptom of a potentially life-threatening disorder

Authors:

Lucija Krtalic 1,2, Neda Striber 1, Barbara Dawidowsky 1, Mirjana Bjelos 2,3,4, Mladen Busic 2,3, 4

Institution:

1 Children's Hospital Zagreb 2 University Eye Clinic, University Hospital "Sveti Duh", Zagreb, 3 Faculty of Medicine Osijek, Faculty of dental medicine and health care Osijek, University Josip Juraj Strossmayer in Osijek 4 Reference center of the Ministry of Health of the Republic of Croatia for pediatric ophthalmology and strabismus

Aim:

To emphasize the importance of a careful evaluation of newly developed ophthalmological symptoms in order to exclude a potentially life-threatening disorder in patients prone to malnutrition

Patients and methods:

An 11-year-old boy was hospitalized after being involved in a car accident and was repeatedly surgically treated due to traumatic injuries of the liver, pancreas and spleen. During the 4th week of hospitalization, the patient presented with manifest diplopia in all directions of gaze except vertical. Two days later, bilateral abduction paresis ensued. Other symptoms included vertigo and headache upon verticalization, nausea and vomiting. His mental status was unaltered. Laboratory findings were within the physiological range and a brain MRI was indicated.

Results:

Brain MRI showed inferior colliculi and bilateral medial thalamic lesions. These findings along with the clinical presentation were concordant with metabolic encephalopathy, presumably Wernicke encephalopathy. Patient was treated with intravenous thiamine. A rapid significant clinical improvement occurred and a follow-up MRI obtained 4 days after the initiation of therapy showed a complete regression of lesions.

Conclusion:

The symptom of diplopia always requires a complete diagnostic evaluation including an MRI scan, as it can be the first symptom of a potentially life-threatening disorder, in this case Wernicke encephalopathy caused by vitamin B1 (thiamine) deficiency.

Kongres / Congress:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU MLADI U OFTALMOLOGIJI / Young Ophthalmologist Section

Titula / Title:

Dr.

Specijalizant / Resident

Ime i prezime / First and Last Name:-First

Lucija

Ime i prezime / First and Last Name:-Last

Krtalić

8. Petrinović-Dorešić Jelena

Naslov:

Dugoročni anatomske i funkcionalne ishodi liječene retinopatije nedonoščadi

Autori:

Petrinović-Dorešić J, Predović J, Kondža-Krstonijević E, Šmidt D.

Ustanova:

Klinika za očne bolesti, Klinička bolnica "Sveti Duh", Zagreb

Cilj:

Nedonošenost još uvijek predstavlja značajan rizični čimbenik za oštećenje vida djeteta. Jedan od najvažnijih uzroka oštećenja vida nedonoščadi je retinopatija. Cilj ovog izlaganja je prikazati anatomske i funkcionalne ishode liječene retinopatije nedonoščadi.

Bolesnici i metode:

Nedonoščad rođena u našoj ustanovi redovito je praćena periodičkim pregledima oćnog dna in direktnom oftalmoskopijom prema vaćećim smjernicama - porodna masa manja ili jednaka 1500g i/ili gestacijska dob manja ili jednaka 32 tj., ali i starija i veća djeca prema indikaciji neonatologa. Za potrebe ove analize uzeto je proteklo desetogodišnje razdoblje (2011.-2021.). Kod djece koja su prema ETROP studiji dosegla stupanj retinopatije koji zahtijeva lijećenje provedeno je lijećenje diodnom laserskom fotokoagulacijom periferne avaskularne retine u oćnoj anesteziji ili intravitrealnom aplikacijom anti-VEGF lijeka ranibizumaba (Lucentis 0,2 mg/0,02ml) u topikalnoj anesteziji ili konzekutivnom kombinacijom oba modaliteta.

Rezultati:

Tijekom navedenog desetogodišnjeg razdoblja na našoj Klinici za ginekologiju je oftalmološki praćeno 362 djece rođene (muških 201, ženskih 161). Prosjećna porodna masa praćene djece je bila 1557 g (raspon 480 - 3290g), a gestacijska dob 222,1 dana (raspon 166 - 278 dana). Od sve praćene nedonoščadi, njih 37 (10,2%) je razvilo retinopatiju (muških 15, ženskih 22). Prosjećna porodna masa djece s retinopatijom je bila 911 g (raspon 480g - 1720g), a prosjećna gestacijska dob 191,1 dan (raspon 166 - 227 dana). Teški oblik retinopatije koji je zahtijevao lijećenje razvilo je njih 11 (4 ž, 7 m). Prosjećna porodna masa lijećene djece je bila 815g (raspon 480-1030g), a gestacijska dob 186,2 dana (raspon 173-205 dana). Kod troje djece učinjena je laserska fotokoagulacija, kod sedmero je apliciran ranibizumab intravitrealno, a kod jedne djevojćice učinjena je prvo laserska koagulacija, a naknadno je apliciran i ranibizumab. Od 11-oro lijećene djece, troje je zbog lošeg općeg stanja premješteno u Kliniku za djećje bolesti, te dal je više nisu bili u našem praćenju. Period praćenja je bio od 1,5-8 godina. Kod šestero djece retinopatija je regredirala i anatomske ishod lijećenja je bio dobar. Kod dvoje djece, unatoć terapiji, došlo je do progresije retinopatije - kod jednog djeteta nakon 5. stupnja na jednom i 4a na drugom, a kod djevojćice kod koje je provedena kombinacija oba modaliteta do V stupnja na oba oka. Kod djece s dobrim ishodom, medijan vidne ošćtrine je bio 0,63 za desno i 0,4 za lijevo oko. Medijan posljednjeg zabilježnog sfernog ekvivalenta za

desne oči je bio -1,06 d i -

2,50 d za lijeve oči. Kod nijednog djeteta liječenog ranibizumabom nije zabilježeno nuspojava koje bi se mogle dovesti u svezu s primjenom lijeka.

Zaključak:

Pravodobno liječenje retinopatije nedonoščadi većinom dovodi do dobrog anatomskog i funkcionalnog ishoda. Mali broj liječene djece u ovoj studiji ne dozvoljava donošenje zaključaka o prednosti jednog modaliteta pred drugim.

Title:

Long-term anatomical and functional outcomes of treated retinopathy of prematurity.

Authors:

Petrinović-Dorešić J, Predović J, Kondža-Krstonijević E, Šmidt D.

Institution:

University Eye Clinic, University Hospital "Sveti Duh", Zagreb

Aim:

Prematurity still represents the significant risk factor for future visual impairment in children. One of the major causes of visual impairment is retinopathy of prematurity. Aim of this report is to show the anatomical and functional outcomes of retinopathy treatment.

Patients and methods:

Premature babies born in our Hospital are regularly followed by periodic indirect ophthalmoscopy examinations according to our guidelines - birth weight less or equal to 1500g and / or gestational age less or equal to 32 weeks, but also bigger and more mature babies if indicated by the attending neonatologist. For the purposes of this report, the last 10-years period (2011-2021) was analysed. In children who reached the threshold for the treatment according to ETROP study either laser treatment of the peripheral avascular retina in general anaesthesia or intravitreal injection of anti-VEGF drug ranibizumab (Lucentis 0,2 mg/0,02ml) in topical anaesthesia, or consecutive combination of both modalities were performed.

Results:

During the stated 10-years period at our Clinic for gynaecology and obstetrics 362 children (201 male, 161 female) were followed-up. Average birth weight was 1557g (range 480-3290g) and gestational age 31,7 weeks (range 23,7 - 35,9 w.). From all followed children, 37 (10,2 %) developed retinopathy (15m, 22f). Average birth weight of children with retinopathy was 991g (range 480-1030g) and gestational age 27,3 w. (range 23,7 - 32,4 w.). Retinopathy requiring therapy reached 11 children (7m, 4f). Average birth weight of treated children was 815g (range 480-1030g), and gestational age 26,2 w. (range 24,7-29,3 w.). In three children laser photocoagulation was performed, in seven ranibizumab was injected intravitreally, and in one girl first the laser and later ranibizumab was applied. Three of 11 treated children were lost to further follow-up due to transfer to another hospital as a result of the general state deterioration. For the remaining eight, follow up period was 1,5 to 8 years. In six, retinopathy regressed with good anatomical outcome. In two children, despite the treatment, retinopathy progressed - in the first following laser to stage V on the one and IVa on the other eye, and in the second where both modalities were performed to stage V on both eyes. In children with good outcome, visual acuity medi

an was 0,63 and 0,4 for the right and left eyes, resp. Median of the last recorded spherical equivalent obtained by retinoscopy in cycloplegia was -1,06 D and -2,50 D for the right and left eyes, resp. In children treated with ranibizumab, no complications that could be related to the application of the drug were noted.

Conclusion:

Timely treatment of retinopathy of prematurity mostly leads to good anatomical and functional outcome. Small number of treated children in this study precludes conclusions about the preferred modality of the treatment.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA PEDIJATRIJSKU OFTALMOLOGIJU I STRABIZAM / Pediatric Ophthalmology and Strabismus section

Titula / Title:

Dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Jelena

Ime i prezime / First and Last Name:-Last

Petrinović-Dorešić

9. Nenad Vukojević

Naslov:

Akutna zonalna okultna vanjska retinopatija (AZOOR)

Autori:

Nenad Vukojević

Ustanova:

Klinika za očne bolesti Medicinskog fakulteta Sveučilišta u Zagrebu, KBC Zagreb

Cilj:

Cilja rada je opisati kliničke značajke i tijek bolesti kod mlade žene s naglim gubitkom vida na desnom oku

Bolesnici i metode:

U prikazu slučaja su predstavljeni oftalmološki status, slikovna i funkcionalna dijagnostika i tijek bolesti.

Rezultati:

Bezbolni gubitak vida i fotopsije, praćeni s poremećajima u vidnom polju desnog oka bili su glavni simptomi bolesti. Fundus fotografija, fundus autofluorescenca, indocyanin green angiografija i fluoresceinska angiografija u ranom tijeku bolesti nisu otkrili patološka zbivanja, ali su promjene detektirane u vanjskim slojevima retine optičkom koherentnom tomografijom i elektoretinografijom. Progresivno oštećenje vidne funkcije indiciralo je uvođenje imunomodulacijske terapije koja je, sporo, ali mi vjerujemo uspješno, zaustavila progresiju bolesti te dovela do djelomičnog oporavka vidne funkcije.

Zaključak:

Akutna zonalna okultna vanjska retinopatija (AZOOR) bi trebala biti razmotrena kao mogući uzrok gubitka vida, osobito kod mladih kratkovidnih žena, kada slikovna dijagnostika u početku bolesti ne pokazuje značajne promjene. Optička koherentna tomografija i elektoretinografija su ključne dijagnostičke metode u početku bolesti, ali kasnije i fundus autofluorescenca koja otkriva promjene karakteristične za ovu bolest.

Title:

Acute zonal occult outer retinopathy (AZOOR)

Authors:

Nenad Vukojević

Institution:

Department of Ophthalmology, School of Medicine University of Zagreb, UHC Zagreb

Aim:

The aim of this study was to describe the clinical features and course of the disease in a young woman with sudden vision loss in the right eye

Patients and methods:

The case report presents the ophthalmological status, imaging and functional diagnostics and the course of the disease.

Results:

Painless vision loss and photopsia, accompanied by disturbances in the visual field of the right eye were the main symptoms of the disease. Fundus photography, fundus autofluorescence, in docyanine green angiography, and fluorescein angiography did not reveal pathological disturbances in the beginning of the disease, but changes were detected in the outer layers of the retina by optical coherence tomography and electroretinography. Progressive impairment of visual function indicated the introduction of immunomodulatory therapy, which, slowly, but we believe, successfully stopped the progression of the disease and led to a partial recovery of visual function.

Conclusion:

Acute zonal occult outer retinopathy (AZOOR) should be considered as a possible cause of vision loss, especially in young myopic women, when imaging at the onset of the disease does not show significant changes. Optical coherence tomography and electroretinography are key diagnostic methods in the beginning of the disease, but fundus autofluorescence, which later reveals changes characteristic for this disease.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA UVEA-u / Uvea section

Titula / Title:

Prof.dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Nenad

Ime i prezime / First and Last Name:-Last

Vukojević

10. Mrazovac Zimak Danijela

Naslov:

Rijetke retinalne bolesti - prikaz slučaja

Autori:

Mrazovac Zimak Danijela, Štanfel Marija, Mandić Krešimir, Jukić Tomislav, Opačić Dalibor, Vukojević Nenad

Ustanova:

Klinika za očne bolesti, KBC Zagreb

Cilj:

Prikazati slučaj asimptomatske bolesnice s promijenjenim retinološkim statusom.

Bolesnici i metode:

Bolesnica u dobi 21 godine, javlja se na redovni oftalmološki pregled za određivanje dioptrije. Učinjen je kompletni oftalmološki pregled s određivanjem vidne oštine, pregledom na biomikroskopu, mjerenjem intraokularnog tlaka aplanacijskom tonometrijom i pregledom fundusa indirektnom oftalmoskopijom. Snimljeni su foto fundusa i fundus autofluorescenca, te OCT makule i v idnog živca. Bolesnica se ranije redovno pratila po pedijatru zbog preuranjenog puberteta, urednog somatskog statusa, bez dokazanih drugih bolesti i stanja. Obiteljska anamneza koliko je poznato negativna je na kronične oftalmološke bolesti i promjene.

Rezultati:

Najbolje korigirana vidna oština oba oka je +0,50 dsph - 2,25 dcyl ax 180 desno, odnosno ax 160 lijevo oko, obostrano vizus 1,0 po Snellenu. Uredan nalaz prednjeg segmenta na biomikroskopu, vrijednosti intraokularnog tlaka 16 mm Hg na oba oka. Na fundusu su nađena područja atrofičnih pigmentnih promjena uz tijek vena u području arka da koji se prate prema periferiji, ostali status fundusa bio je uredan. Bolesnica je upućena na obradu snimanja vidnog polja, planira se snimanje FAG+ICG, provjeren je kolorni vid. Upućena je na internističku obradu koja do sada nije našla patomorfološki supstrat. Dijagnosticirana je pigmentna paravenska retinokoroidalna atrofija oba oka.

Zaključak:

Pigmentna paravenska retinokoroidalna atrofija (PPRCA) je rijedak entitet karakteriziran nakupljanjem pigmenta karakteristične lokalizacije uz tijek retinalnih vena. Obično se radi o asimptomatskim bolesnicima kod kojih su zahvaćena oba oka. S obzirom na mogući spektar diferencijalne dijagnoze, bitno je isključiti progresivnu retinološku bolest. Ne postoji specifično liječenje. Ukoliko se radi o primarnoj PPRCA prognoza je dobra jer se radi o bolesti neprogresivnog ili sporo progresivnog tijeka.

Title:

Rare retinal disorders – case report

Authors:

Mrazovac Zimak Danijela, Štanfel Marija, Mandić Krešimir, Jukić Tomislav, Opačić Dalibor, Vukojević Nenad

Institution:

Department of Ophthalmology, UHC Zagreb

Aim:

To present a case of asymptomatic patient with altered retinal status.

Patients and methods:

21-year-old patient came to a regular ophthalmological check-up. A complete ophthalmological examination was performed - visual acuity testing, slit-lamp examination, measurement of intraocular pressure by applanation tonometry and fundus examination by indirect ophthalmoscopy. Fundus photography and fundus auto-fluorescence, as well as OCT of the macula and optic nerve were done. The patient was previously regularly monitored by a pediatrician due to premature puberty, has normal somatic status, without proven other diseases and conditions. Family history is negative for chronic ophthalmic diseases and disorders.

Results:

Best corrected visual acuity on both eyes was 1.0 (Snellen chart), +0.50 dsph - 2.25 dcyl ax 180 on the right and ax 160 on the left eye respectively. Slit lamp examination revealed normal status, intraocular pressure was 16 mm Hg on both eyes. Fundus examination revealed areas of atrophic pigment changes along the veins in the superior and inferior arcade extending towards periphery. The patient was referred for further ophthalmological diagnostics - visual field test, FAG + ICG; color vision was checked. She was also referred to internal medicine specialist, who did not find a pathomorphological cause so far. Patient was diagnosed with pigmented paravenous retinochoroidal atrophy of both eyes.

Conclusion:

Pigmented paravenous retinochoroidal atrophy (PPRCA) is a rare disorder characterized by perivenous accumulation of pigment clumps associated with peripapillary and radial zones of retinochoroidal atrophy that are distributed along the retinal veins. Patients are usually asymptomatic, both eyes are affected. Given the possible spectrum of differential diagnosis, it is important to exclude progressive retinal disease. There is no specific treatment. If it is a case of a primary PPRCA, the prognosis is good because it is a non-progressive or slowly progressive disease.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA MREŽNICU / Retina section

Titula / Title:

Dr.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Danijela

Ime i prezime / First and Last Name:-Last

Mrazovac Zimak

11. Adrian Lukenda

Naslov:

Upotreba mrežnih alata za jednostavan "fitting" skleralnih kontaktnih leća kod pacijenata s nepravilnim rožnicama

Autori:

Adrian Lukenda, Željka Karaman Martinović, Nikola Ćibarić, Snježana Lovrinčević

Ustanova:

Očna poliklinika Opto centar, Zagreb

Cilj:

prikazati jednostavnost i učinkovitost upotrebe mrežnih alata za fitting skleralnih kontaktnih leća na slučajevima pacijenata s jako nepravilnim rožnicama.

Bolesnici i metode:

kombinacija inovativnih Onefit MED skleralnih kontaktnih leća (Blanchard, Cooper Vision) i "online" alata proširila je mogućnosti prilagodbe i preciznost fittinga kod pacijenata s nepravilnim rožnicama uz značajno smanjenje vremena potrebnog za propisivanje ovih leća. Veća točnost u propisivanju omogućuje smanjenje debljine suznog rezervoara ispod leća čime se povećava prenosivost kisika do rožnice. Sve leće proizvedene su u laboratoriju Opto centra. Prilagodba parametara zakrivljenosti ovih leća omogućena je u četiri područja: središnjoj zoni (C), zoni srednje periferije (M), limbalnoj zoni (L) te u području ruba leće (E). Standardni promjer ovih leća je 15.6 mm, uz mogućnost povećanja na 16.0 i 16.4 mm. Probne leće sadržavaju kružne oznake vidljive na biomikroskopu u području M i L zone s mogućnostima prilagodbe uzdignuća leće u rasponu od +300 do -

300 μm. Uz kliničke parametre, bit će prikazane fotografije, te OCT i Scheimpflug Pentacam nalaži nositelja ovih skleralnih kontaktnih leća propisanih putem mrežnih kalkulatora.

Rezultati:

Parametri prikazanih leća određeni su uz korištenje mrežnih alata na osnovi probnih leća s kružnim oznakama. Rezultati mrežnih izračuna u potpunosti su predvidljivi i mogu se koristiti kao ključni parametri za narudžbu leća bez potrebe za dodatnom prilagodbom parametara uzdignuća i jakosti dioptrije ovih leća.

Zaključak:

Upotreba mrežnih alata značajno povećava predvidljivost i jednostavnost fittinga skleralnih kontaktnih leća kod pacijenata s nepravilnim rožnicama uz istovremeno smanjenje vremena potrebnog za propisivanje ovih leća

Title:

Using online tools for easy scleral lens fitting in patients with irregular corneas

Authors:

Adrian Lukenda, Željka Karaman Martinović, Nikola Ćibarić, Snježana Lovrinčević

Institution:

Opto Centar Eye Center

Aim:

To demonstrate the ease of use and efficacy of online tools for scleral contact lens fitting in cases of patients with highly irregular corneas.

Patients and methods:

The combination of innovative Onefit MED scleral contact lenses (Blanchard, Cooper Vision) and online fitting tools has expanded the possibilities for customization and increased the precision in patients with irregular corneas while decreasing the patient chair time. Higher accuracy in prescribing these lenses facilitates the reduction of the tear fluid reservoir beneath the lens thus enabling higher oxygen transmissibility. All lenses are manufactured in the Opto centar lab. Lens parameter adjustment is possible in four zones: central (C), mid-peripheral (M), limbal (L) and the edge (E). Standard diameter is 15.6 mm with options of increasing the diameter to 16.0 and 16.4 mm. Diagnostic lenses are etched with circular lines marking the M and L zone that can be observed at the slit lamp. The amplitude of change in these zones is from +300 to -300 μm . In addition to clinical parameters, slit lamp photographs as well as OCT and Scheimpflug Pentacam findings of the scleral contact lens wearers will be shown.

Results:

The lens parameters are calculated by using online tools based on diagnostic lenses with circular markings. The results of online calculations are fully predictable and can be used as final parameters for the lens order without the need for the additional adjustment for the lens elevation and power.

Conclusion:

The use of online tools significantly improves the predictability and simplicity of scleral contact lenses fitting in patients with irregular corneas whilst decreasing patient chair time.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJAU ZA KONTAKTOLOGIJU / Contactology section

Titula / Title:

Dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Adrian

Ime i prezime / First and Last Name:-Last

Lukenda

12. Dora Kujundžić

Naslov:

Nove spoznaje u konzervativnoj terapiji suhe makularne degeneracije

Autori:

Dora Kujundžić, Damir Bosnar, Mladen Bušić, Biljana Kuzmanović Elabjer, Senad Ramić, Mira Kn ežić

Ustanova:

Klinika za očne bolesti, Klinička bolnica „Sveti Duh“, Zagreb, Medicinski fakultet Osijek, Fakultet za dentalnu medicinu i zdravstvo Osijek, Sveučilišta J.J. Strossmayera u Osijeku, Referentni cent ar Ministarstva zdravstva za dječju oftalmologiju i strabizam

Cilj:

Analiza uloge mikronutrijenata na smanjenje rizika u razvoju suhe makularne degeneracije

Bolesnici i metode:

Objavljeni pregledni radovi i klinička istraživanja analizirani su u bazama podataka: PubMed i U pToDate pomoću ključnih riječi: suha makularna degeneracija, mikronutrijenti, konzervativna terapija suhe makularne degeneracije, utjecaj prehrane na AMD, vitamin C, vitamin E, vitamin D, c ink, zeaksantin, lutein i omega-3 masne kiseline

Rezultati:

Identificirano je i analizirano ukupno 10 preglednih radova i kliničkih istraživanja. Pregledom do stupne literature dokazani su pozitivni učinci sljedećih mikronutrijenata: vitamin C, vitamin E, c ink, zeaksantin, lutein, omega-3 masne kiseline. Ispitanici ih unose kroz prehranu ili kao dodatke prehrani

Zaključak:

Rezultatima provedenih studija dokazano je kako je uz odgovarajuću prehranu i uz korištenje d odataka prehrani moguće smanjiti rizik razvoja i progresije suhe makularne degeneracije. Sama prehrana ne osigurava dovoljne količine mikronutrijenata koji su potrebni za smanjenje progre sije bolesti.

Title:

The role of micronutrients in reducing the risk of progression of AMD

Authors:

Dora Kujundžić, Damir Bosnar, Mladen Bušić, Biljana Kuzmanović Elabjer, Senad Ramić, Mira Kn ežić

Institution:

University Eye Clinic, University Hospital "Sveti Duh", Zagreb, Faculty of Medicine Osijek, Faculty of dental medicine and health care Osijek, University Josip Juraj Strossmayer in Osijek Referenc e center of the Ministry of Health of the Republic of Croatia for pediatric ophthalmology and str abismus

Aim:

Analysis of the role of micronutrients in reducing the risk of progression of AMD

Patients and methods:

Published reviews and clinical trials in PubMed and UpToDate databases were analyzed using key words: dry macular degeneration, micronutrients, conservative therapy of dry macular degeneration, the impact of diet on AMD, vitamin C, vitamin E, vitamin D, zinc, zeaxanthin, lutein and omega-3 fatty acids

Results:

10 reviews and clinical trials were identified and analyzed. The available literature has proven the positive effects of the following micronutrients: vitamin C, vitamin E, zinc, zeaxanthin, lutein and omega-3 fatty acids. These micronutrients are ingested through the diet or as dietary supplements.

Conclusion:

The results of the studies have shown that it is possible with proper nutrition and the use of dietary supplements to reduce the risk of developing and progressing dry macular degeneration. The diet alone does not provide sufficient amounts of the micronutrients needed to reduce disease progression.

Kongres / Congress:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU MLADI U OFTALMOLOGIJI / Young Ophthalmologist Section

Titula / Title:

Dr.

Specijalizant / Resident

Ime i prezime / First and Last Name:-First

Dora

Ime i prezime / First and Last Name:-Last

Kujundžić

13. Kopic Andrijana

Naslov:

Oko za oko, zub za zub

Autori:

Kopic, Andrijana; Vinkovic, Maja; Benašić, Tvrtka; Bradvica, Mario; Barac, Josip; Kopic, Vlatko; Bošnjak, Andrija

Ustanova:

KBC Osijek, Medicinski fakultet Osijek

Cilj:

Cilj ovog presječnog ispitivanja bio je utvrditi povezanost očnih komplikacija dijabetesa sa stadijem parodontne bolesti i sistemskih proupalnih citokina kod bolesnika oboljelih od dijabetesa u zadnjem stadiju kronične bubrežne bolesti.

Bolesnici i metode:

Ukupno su analizirani podatci za 35 bolesnika u zadnjem stadiju kronične bubrežne bolesti koji su na hemodijalizi. Svim ispitanicima uzeti su anamnestički podatci, učinjena opsežna laboratorijska analiza, ELISA analiza serumskih citokina: IL-6, IL-17A, TNFalfa, učinjena procjena parodontološkog statusa, kompletan oftalmološki pregled s pregledom fundusa i OCT makule.

Rezultati:

Rezultati su pokazali da je IL-

6 najosjetljiviji indikator upale u ovoj skupini ispitanika, te da je njegova razina najviše povezana s lošijim parodontalnim statusom i incidencijom dijabetičkih komplikacija na oku.

Zaključak:

Parodontna bolest jedna je od najrasprostranjenijih bolesti na svijetu i stanje je niske razine kronične upale koje može dodatno opteretiti imunološki sustav osobito kompromitiranih bolesnika. Njezina sistemska povezanost s dijabetesom opisana je u brojnim istraživanjima. Dijabetes kod svojih komplikacija dodatno potiče određenu razinu upale koja u začaranom krugu može dovesti do još većih vaskularnih, očnih i bubrežnih komplikacija. Iz tog razloga iznimno je bitno kod ovih bolesnika provoditi detaljne sistematske preglede, te imati u vidu moguću složenost upalnih sistemskih procesa kod ove bolesti.

Title:

An eye for an eye, a tooth for a tooth

Authors:

Kopic, Andrijana; Vinkovic, Maja; Benašić, Tvrtka; Bradvica, Mario; Barac, Josip; Kopic, Vlatko; Bošnjak, Andrija

Institution:

University Hospital Centre Osijek, Faculty of medicine Osijek

Aim:

The aim of this cross-sectional study was to determine the association of ocular complications of diabetes with the st

age of periodontal disease and systemic proinflammatory cytokines in patients with diabetes in the last stage of chronic kidney disease

Patients and methods:

We analyzed data for 35 patients in the last stage of chronic kidney disease who are on hemodialysis. All subjects had anamnestic data, we performed extensive laboratory analysis, ELISA analysis of serum cytokines: IL-6, IL-17A, TNF α , performed assessment of periodontal status, complete ophthalmological examination and macular OCT.

Results:

The results showed that IL-6 is the most sensitive indicator of inflammation in this group of subjects, and that its level is mostly associated with poorer periodontal status and the incidence of diabetic complications in the eye.

Conclusion:

Periodontal disease is one of the most prevalent diseases and is also a condition of chronic inflammation that can further burden the immune system of compromised patients. Its systemic association with diabetes has been studied in numerous studies. Diabetes in its complications further stimulates a certain level of inflammation which in a vicious circle can lead to even greater vascular, ocular and renal complications. For this reason, it is important to conduct detailed systematic examinations in diabetic patients, and also keep in mind the possible complexity of inflammatory systemic processes in this disease.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA MREŽNICU / Retina section

Titula / Title:

Dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Andrijana

Ime i prezime / First and Last Name:-Last

Kopić

14. Maja Novak-Stroligo

Naslov:

Miastenija gravis - maskirani simptomi - prikaz slučaja djevojčice

Autori:

Maja Novak-Stroligo; Tamara Mišljenović-Vučerić

Ustanova:

Klinički bolnični centar Rijeka, Klinika za oftalmologiju

Cilj:

Cilj ovog prikaza slučaja je da nas podsjeti na miasteniju gravis, kao rijetku, ali moguću bolest u pedijatrijskoj dobi. Pacijenti s miastenijom mogu se javiti najprije oftalmologu radi očnih manife stacija. Bolest zna biti zamaskirana raznolikim promjenjivim prezentacijama. Serološka testiranja u visokim postocima oboljelih mogu dati negativne rezultate, ali jednostavni testovi poput test a spavanja i testa ledom su klinički značajni da u takvom slučaju potvrde dijagnozu.

Bolesnici i metode:

14 -

godišnja djevojčica je pregledana i obrađena od neuropedijatra i oftalmologa radi glavobolje, vr toglavice, duple slike i umora, te joj je najprije dijagnosticirana idiopatska intrakranijalna hipertenzija. Kako nije došlo do poboljšanja na terapiju, i obzirom na varijabilnost diplopije te razvoj va rijabilne ptoze, testirana je na miasteniju gravis. Premda rijetka u djece, miastenija gravis se pojavljuje u juvenilnoj formi, ili kao kongenitalni miastenični sindrom (heterogena grupa nasljednih oboljenja neuromuskularne veze) ili kao prolazna neonatalna miastenija.

Rezultati:

Juvenilna miastenija gravis (JMG) je primarno klinička dijagnoza klasičnog obrasca fluktuirajuće slabosti i zamora, budući da titar antitijela za acetilholinske receptore u velikom postotku pacijenata može biti normalnih vrijednosti. Test ledom je učinjen i dao je pozitivan rezultat. To je jedno stavan, ali efektivan test koji može poslužiti da potvrdi dijagnozu u seronegativnih pacijenata.

Zaključak:

Miastenija gravis, premda rijetka u djece, je dijagnoza na koju moramo pomisliti pri određenoj kliničkoj slici. Kao autoimuna bolest neuromuskularnog spoja skeletnih mišića, može biti sistemna, uz okularne simptome, ili kao okularna miastenija. U postavljanju dijagnoze i liječenju potrebna je suradnja neurologa i oftalmologa.

Title:

Myasthenia gravis - the great masquerader – a case report of a girl

Authors:

Maja Novak-Stroligo; Tamara Mišljenović-Vučerić

Institution:

Clinical Hospital Center Rijeka, Department of Ophthalmology

Aim:

The goal of this case report presentation is to remind us of myasthenia gravis, as a rare, but also a disease sometimes present in childhood. A patient with myasthenia may present to the oph

thalmologist first due to ocular involvement. It is called the great masquerader because of its varied clinical presentation. Serology testing could be negative in a high percentage of patients, but simple tests like sleep and ice tests are effective to confirm the diagnosis in such cases.

Patients and methods:

A 14 years old girl presented to a neuro pediatrician and ophthalmologist with a headache, vertigo, double image, and fatigue at first diagnosed as idiopathic intracranial hypertension. After starting therapy without results, according to her variable diplopia, and developing variable ptosis, she has been tested for myasthenia gravis. Although rare in children, myasthenia gravis could appear: in a juvenile form, as a congenital myasthenic syndrome (heterogeneous group of genetically inherited disorders of the neuromuscular junction), or as transient neonatal myasthenia

Results:

Juvenile myasthenia gravis (JMG) is primarily a clinical diagnosis with classical patterns of fluctuating weakness and fatigability, due to the fact that acetylcholine receptor antibodies (AChR-Abs) titer could be normal in a great percentage of patients.

Ice test was performed and positive. It is a simple but effective clinical test that can be used to confirm the diagnosis of myasthenia gravis in seronegative patients.

Conclusion:

Myasthenia gravis, although rare in children is a diagnosis to be considered in a certain clinical presentation. As an autoimmune disease, affecting the neuromuscular junction of the skeletal muscles, it can be present as a systemic with ocular involvement, or only as ocular myasthenia. The diagnostics and treatment involve both neurologists and ophthalmologists.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA PEDIJATRIJSKU OFTALMOLOGIJU I STRABIZAM / Pediatric Ophthalmology and Strabismus section

Titula / Title:

Dr.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Maja

Ime i prezime / First and Last Name:-Last

Novak-Stroligo

15. Šaric Dean

Naslov:

Intralase iDesign metoda za korekciju miopskog astigmatizma iznad 5 dioptrija

Autori:

Saric D, Grgić D, Krolo I, Vukas Z

Ustanova:

Poliklinika Optcal Express

Cilj:

Istražiti učinkovitost LASIK Intralase iDesign metode za korekciju miopskog astigmatizma iznad 5 dioptrija

Bolesnici i metode:

U analizu su bili uključeni pacijenti sa miopskim astigmatizmom između 5 i 6 dioptrija operirani Intralase iDesign metodom refrakcijske korekcije u razdoblju od 2016. do 2020. godine praćeni 6 mjeseci postoperativno.

Rezultati:

52 očiju od 47 pacijenata operiranih Intralase iDesign metodom praćeni su 6 mjeseci iza zahvata. Srednji preoperativni astigmatizam bio je -
 5.55 ± 0.46 . Postoperativno nakon 6 mjeseci bio je -
 0.83 ± 0.55 . 66% očiju bilo je postoperativno unutar 0.5 dioptrije cilindra, a 92% očiju unutar 1,0 dioptrije astigmatizma. 5 očiju trebalo je dodatnu korekciju za preostali astigmatizam

Zaključak:

LASIK intralase iDesign sigurna i pouzdana metoda za korekciju miopskog astigmatizma preko 5 dioptrija

Title:

LASIK Intralase iDesign method for myopic astigmatism over 5 diopters

Authors:

Saric D, Grgić D, Krolo I, Vukas Z

Institution:

Optical Express

Aim:

To investigate the refractive outcomes of laser in situ keratomileusis (LASIK) intralase iDesign for myopic astigmatism over 5 diopters (D).

Patients and methods:

This study included consecutive astigmatic patients undergoing LASIK intralase iDesign between 2016 and 2020 with astigmatism of 5 to 6 D, and postoperative follow-up of 6 months

Results:

52 eyes of 47 patients with follow-up of 6 months were analysed. Mean preoperative manifest astigmatism was -
 5.55 ± 0.46 , postoperative astigmatism was -
 0.83 ± 0.55 . 66 percent of the eyes had postoperative astigmatism within ± 0.5 D of emmetropia

(P = 0.19), and 92% eyes were within 1,0 D of attempted astigmatic correction . 5 eyes needed enhancement refractive surgery.

Conclusion:

LASIK intralase iDesign is safe and predictable method for refractive laser correction of high astigmatism over 5 diopters

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA KATARAKTU I REFRAKTIVNU KIRURGIJU / Cataract and Refractive surgery section

Titula / Title:

Doc.dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Dean

Ime i prezime / First and Last Name:-Last

Šarić

16. Matija Blažeka

Naslov:

Mask-Associated Dry Eye During COVID-19 Pandemic-
How Face Masks Contribute to Dry Eye Disease Symptoms

Autori:

Matija Blažeka, Iva Krolo, Ivan Merdžo, Izabela Vrtar, Ivan Sabol, Ivanka Petric-Vicković

Ustanova:

KBC Sestre milosrdnice

Cilj:

Determining if wearing a face mask during COVID-19 pandemic causes a new onset or deterioration of previously existing dry eye disease (DED).

Bolesnici i metode:

A prospective cohort study included 203 participants, all using surgical facemasks daily due to new regulations during COVID-19 pandemic. Participants completed a survey, containing modified Ocular Surface Disease Index (OSDI) questionnaire. They were divided into groups according to: sex, age, duration of face mask-wear, and existence of prior DED history.

Rezultati:

Our results indicate that women have a statistically higher OSDI score compared to men (14.4 (IQR = 2.4 - 41.7) vs. 5.0 (IQR = 0.0 - 24.4); $P = .004$). Age did not significantly affect OSDI median values. Group that used masks from 3 to 6 hours/day demonstrated significantly higher OSDI scores compared to <3 hour/day group (15.3 (IQR = 8.3 - 47.7) vs. 8.3 (IQR = 0.0 - 35.1); $P = .001$). OSDI score was significantly greater in participants with prior DED history compared to those without it (36.1 (IQR = 14.1 - 61.6) vs. 4.2 (IQR = 2.3 - 8.3); $P < .001$). Participants with prior DED exhibited greater worsening of their disturbances during mask wearing period compared to the ones without previous DED (54.8% vs. 17.7%, Chi-Square 28.3 DF1; $P < .001$), regardless of daily mask wear duration.

Zaključak:

Our study confirmed the existence of mask-associated dry eye (MADE), most profoundly in females, subjects with a history of prior DED, and if wearing a face mask lasts longer than 3 hours per day. Ophthalmologists should advise their patients of the potential ocular surface health risks related to inadequately fitted facemasks.

Title:

Mask-Associated Dry Eye During COVID-19 Pandemic-
How Face Masks Contribute to Dry Eye Disease Symptoms

Authors:

Iva Krolo, Matija Blažeka, Ivan Merdžo, Izabela Vrtar, Ivan Sabol, Ivanka Petric-Vicković

Institution:

University hospital Sestre milosrdnice

Aim:

Determining if wearing a face mask during COVID-19 pandemic causes a new onset or deterioration of previously existing dry eye disease (DED).

Patients and methods:

A prospective cohort study included 203 participants, all using surgical facemasks daily due to new regulations during COVID-19 pandemic. Participants completed a survey, containing modified Ocular Surface Disease Index (OSDI) questionnaire. They were divided into groups according to: sex, age, duration of face mask-wear, and existence of prior DED history.

Results:

Our results indicate that women have a statistically higher OSDI score compared to men (14.4 (IQR = 2.4 - 41.7) vs. 5.0 (IQR = 0.0 - 24.4); $P = .004$). Age did not significantly affect OSDI median values. Group that used masks from 3 to 6 hours/day demonstrated significantly higher OSDI scores compared to <3 hour/day group (15.3 (IQR = 8.3 - 47.7) vs. 8.3 (IQR = 0.0 - 35.1); $P = .001$). OSDI score was significantly greater in participants with prior DED history compared to those without it (36.1 (IQR = 14.1 - 61.6) vs. 4.2 (IQR = 2.3 - 8.3); $P < .001$). Participants with prior DED exhibited greater worsening of their disturbances during mask wearing period compared to the ones without previous DED (54.8% vs. 17.7%, Chi-Square 28.3 DF1; $P < .001$), regardless of daily mask wear duration.

Conclusion:

Our study confirmed the existence of mask-associated dry eye (MADE), most profoundly in females, subjects with a history of prior DED, and if wearing a face mask lasts longer than 3 hours per day. Ophthalmologists should advise their patients of the potential ocular surface health risks related to inadequately fitted facemasks.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU MLADI U OFTALMOLOGIJI / Young Ophthalmologist Section

Titula / Title:

Dr.

Specijalizant / Resident

Ime i prezime / First and Last Name:-First

Matija

Ime i prezime / First and Last Name:-Last

Blažeka

17. Bućan Kajo

Naslov:

Umijeće izbora terapije- nadolazi li era brolocizumaba?

Autori:

Bućan Kajo, Marković Irena, Antonela Gverović Antunica, Pleština Borjan Ivna, Batistić Darko, Bućan Ivona

Ustanova:

Klinika za očne bolesti KBC Split, Odjel za oftalmologiju i optometriju OB Dubrovnik, Očna poliklinika dr.Bućan d.o.o.

Cilj:

Izvjestiti o ranim iskustvima sa stvarnim ishodima prelaska na terapiju brolocizumabom u pacijentima koji su prethodno liječeni drugim anti-VEGF lijekovima.

Bolesnici i metode:

Bolesnici s refraktornim oblikom nAMD -

om prebačeni su na terapiju brolocizumabom. Funkcionalni i strukturni parametri procijenjeni su u 12 tjedana nakon prve injekcije brolocizumaba, uključujući najbolje korigiranu oštrinu vida (BCVA), središnju debljinu retine u foveoli (CFT - μm) i volumen makule (mm^3).

Rezultati:

Ispitano je 11 očiju u 8 pacijenata s nAMD; prosječne dobi od $75,5 \pm 8,1$ godina (\pm SD). Prosječna promjena BCVA bila je $0,15 \pm 0,27$ ($p = 0,115$). Utvrđena je značajna promjena CFT s prosječnim umanjnjem od -

$84,81 \pm 72,63 \mu\text{m}$ (\pm SD) i $-0,31 \pm 0,44 \text{mm}^3$ (\pm SD) za volumen makule (sve $p < 0,001$). Intraokularna upala opažena je u jednom oku bez dugoročnih posljedica.

Zaključak:

Rezultati ukazuju na to da prijelaz na brolocizumab može predstavljati mogućnost liječenja u bolesnika s nAMD-om koji slabo reagira na druga anti-VEGF sredstva. Potrebne su dugoročne analize za procjenu učinkovitosti i posebno sigurnosti brolocizumaba u svakodnevnom kliničkom radu.

Title:

The art of drug choice - is the era of brolocizumab coming?

Authors:

Bucan Kajo, Markovic Irena, Antonela Gverovic Antunica, Plestina Borjan Ivna, Batistic Darko, Bucan Ivona

Institution:

Department of Ophthalmology, University Hospital Center Split Department of Ophthalmology and Optometry OB Dubrovnik Eye Polyclinic dr. Bućan

Aim:

We report on early experiences with outcomes of switch to brolocizumab therapy in patients previously treated with other anti-VEGF drugs.

Patients and methods:

Patients with refractory nAMD were switched to brolocizumab therapy. Functional and structural parameters were assessed 12 weeks after the first injection of brolocizumab, including best corrected visual acuity (BCVA), central retinal thickness in the foveola (CFT - μm), and macular volume (mm^3).

Results:

Eleven eyes were examined in 8 patients with nAMD; mean age 75.5 ± 8.1 years (\pm SD). The mean change in BCVA was 0.15 ± 0.27 ($p = 0.115$). A significant change in CFT was found with an average decrease of $-84.81 \pm 72.63 \mu\text{m}$ (\pm SD) and $-0.31 \pm 0.44 \text{ mm}^3$ (\pm SD) for macular volume (all $p < 0.001$). Intraocular inflammation was observed in one eye without long-term consequences.

Conclusion:

The results suggest that switch to brolocizumab may represent a treatment option in patients with nAMD who respond poorly to other anti-VEGF agents. Long-term analyzes are needed to assess the efficacy and in particular the safety of brolocizumab in day-to-day clinical work.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA MREŽNICU / Retina section

Titula / Title:

Prof.dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Kajo

Ime i prezime / First and Last Name:-Last

Bučan

18. Šarić Dean

Naslov:

Porast intraokularnog tlaka nakon penetrantne i lamelarne keratoplastike

Autori:

Šarić D, Ramić S, Kuzmanović Elabjer B, Bušić M

Ustanova:

Klinika za očne bolesti, Klinička bolnica „Sveti Duh“, Zagreb

Cilj:

Istražiti incidenciju porasta intraokularnog tlaka nakon penetrantne i amelarne keratoplastike

Bolesnici i metode:

Kod 129 očiju od 92 pacijenta učinjena je penetrantna keratoplastika, a kod 68 očiju od 55 pacijenata endotelna keratoplastika. Mjeren je intraokularni tlak postoperativno tijekom prve godine iza zahvata.

Rezultati:

Incidencija porasta intraokularnog tlaka i tlaka koji je zahtijevao liječenje pronađena je kod 45,5 % pacijenata nakon penetrantne keratoplastike i 34,6% nakon endotelne keratoplastike

Zaključak:

Incidencija povišenog intraokularnog tlaka i razvoj sekundarnog glaukoma značajno je veći kod pacijenata nakon penetrantne keratoplastike u odnosu na endotelnu keratoplastiku. Razlog tome može biti izraženija trauma i intenzivnija upotreba steroidne terapije postoperativno kod penetrantne keratoplastike. Daljnja istraživanja potrebna su da se dokaže ova teorija.

Title:

Intraocular Pressure Elevation after Lamellar versus Full-Thickness Penetrating Keratoplasty

Authors:

Šarić D, Ramić S, Kuzmanović Elabjer B, Bušić M

Institution:

Eye Clinic, Clinical Hospital Sveti Duh, Zagreb

Aim:

To investigate the incidence of glaucoma after penetrating keratoplasty (PK) and endothelial keratoplasty (EK).

Patients and methods:

129 eyes of 92 patients undergoing PK and 68 eyes of 55 patients undergoing EK between 2015 and 2020. Exclusion criteria was glaucoma before corneal surgery. Postoperative intraocular pressure (IOP) was measured during first postoperative year.

Results:

The incidence of elevated IOP and elevated IOP requiring treatment was 45.5% and 34.6%, in PK and EK group. The risk of elevated IOP was greater in first months after surgery and was getting smaller with time.

Conclusion:

The incidence of elevation of IOP after keratoplasty and development of glaucoma are significantly decreased in endothelial keratoplasty compared with penetrating keratoplasty. It can be because of less trauma and reduced postoperative use of steroids. More investigations are needed to confirm that theory.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA KATARAKTU I REFRAKTIVNU KIRURGIJU / Cataract and Refractive surgery section

Titula / Title:

Doc.dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Dean

Ime i prezime / First and Last Name:-Last

Šarić

19. Škunca Herman Jelena

Naslov:

Je li infekcija Sars-Cov-2 virusom mogući uzrok binokularne diplopije? Retrospektivna studija

Autori:

Škunca Herman J, Malenica Ravlić M, Knežević L, Sušić E, Marić V, Vataavuk Z.

Ustanova:

Klinika za očne bolesti, KBC "Sestre milosrdnice"

Cilj:

Prikazati uzroke, dijagnozu i klinički tijek akutne binokularne diplopije (ABD) i njezinu povezanost s infekcijom Sars-Cov-2 virusom kod bolesnika obrađenih u hitnoj službi tercijarnog centra KBC „Sestre milosrdnice“, Zagreb.

Bolesnici i metode:

Provedena je retrospektivna analiza medicinske dokumentacije 58 bolesnika s ABD-om koji su obrađeni u objedinjenom hitnom prijemu KBCa „Sestre milosrdnice“ tijekom jednogodišnjeg razdoblja (01. srpnja 2020.-

1. srpnja 2021.). Dodatno je kod ispitanika s diplopijama nepoznate etiologije kao i kod onih s mirkovaskularnom bolešću ispitana povezanost sa Sars-Cov-2 infekcijom potvrđena pozitivnim PCR testom. Kriteriji isključenja bili su: (a) monokularna diplopija, (b) binokularna diplopija povezana sa strabizmom i (c) bolest štitnjače s manifestacijom na očima.

Rezultati:

Akutna binokularna diplopija bila je češća kod muškaraca nego kod žena (m:ž=36:22). Dobna skupina ispitanika kretala se od 13 do 82 godine s 48,27% ispitanika starijih od 65 godina (n = 28). Najčešći uzrok ABDa (70,69% slučajeva) bile su pareze kranijalnih živaca (n=41) od kojih je vodeća dijagnoza (n = 25, 43,1%) bila pareza abducensa s 4 bilateralna slučaja. Pretpostavljena mikrovaskularna bolest, hipertenzija i dijabetes, činila je najveću podskupinu bolesnika s parezom kranijalnih živaca (17 od 58 bolesnika, 29,3%), od kojih je jedan od njih imao infekciju Sars-Cov-2 virusom tijekom pojave diplopije. Drugi bolesnik razvio je izoliranu diplopiju 79 dana nakon infekcije Sars-Cov-

2 virusom. Uzrok ABDa nije pronađen kod 11 bolesnika niti je itko od navedenih imao infekciju Sars-Cov-

2 virusom za vrijeme trajanja simptoma ili prije pojave istih. Spontani oporavak ABDa nakon mjesec dana od pojave diplopija zabilježen je kod 18 slučajeva (31,03%) u podgrupi bolesnika s mikrovaskularnom bolesti kao i u onoj s diplopijama nepoznate etiologije, uključujući i spontani oporavak kod jedinog bolesnika povezanog s PCR pozitivnom infekcijom Sars-Cov-2 virusom.

Zaključak:

Pronađen je samo jedan slučaj ABD-a povezan s infekcijom Sars-cov-2 virusom. Nakon pojave diplopija, spontani oporavak u danom razdoblju očekuje se kod bolesnika s mikrovaskularnom bolešću, koja je i glavni uzrok ABD -a.

Title:

Is Sars-Cov-2 infection possible cause of binocular diplopia? A retrospective study

Authors:

Škunca Herman J, Malenica Ravlić M, Knežević L, Sušić E, Marić V, Vataavuk Z.

Institution:

University Eye Clinic, University Clinical Centre "Sestre milosrdnice"

Aim:

To evaluate causes, diagnosis and clinical course of acute onset binocular diplopia (AOBD) and its relation to Sars-Cov-2 infection in patients presented as emergency in the tertiary center "Sestre milosrdnice", Zagreb.

Patients and methods:

A retrospective analysis of the medical records of 58 patients with AOBD who attended the emergency department of University Clinical Center "Sestre milosrdnice" during a one-year period (1 July 2020 – 1 July 2021) was performed. Additionally, participants with diplopia that is caused by unknown etiology and those with microvascular disease were investigated for its potential relation to PCR positive Sars-Cov-2 infection. The exclusion criteria were: (a) monocular diplopia, (b) binocular diplopia accompanied with strabismus and (c) thyroid eye disease.

Results:

AOBD occurred more frequently in male than in female (m:f=36:22 patients). Participants' ages range from 13 to 82 years with 48,27% older than 65 years (n=28). Cranial nerve palsies were the most common cause of binocular diplopia accounting for 41 (70,69%) of cases. Abducens nerve palsy was the leading diagnosis (n=25, 43,1%) of which 4 were bilateral. The largest subgroup of patients with cranial nerve palsies comprised those with presumed microvascular disease owing to hypertension or diabetes accounting for 17 of 58 patients (29,3%) of which 1 of them had Sars-Cov-2 infection during the diplopia presentation. Second one developed diplopia with no other symptoms 79 days after Sars-Cov-2 infection. Eleven patients had binocular diplopia from unknown cause, of which no one had Sars-Cov-2 infection before and during the onset of symptoms. In microvascular and unknown etiology subgroups there was a spontaneous resolution in 18 cases (31,03%) including one associated with PCR positive Sars-Cov-2 infection after a one month period.

Conclusion:

Only one case of AOBD associated with Sars-cov-2 infection was found. Patients with microvascular disease, as the major cause of AOBD, are likely to recover spontaneously in early post symptom period.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA PEDIJATRIJSKU OFTALMOLOGIJU I STRABIZAM / Pediatric Ophthalmology and Strabismus section

Titula / Title:

Dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Jelena

Ime i prezime / First and Last Name:-Last

Škunca Herman

20. Lelas Josip

Naslov:

Dugoročni učinci cross-linkinga kod pacijenata sa keratokonusom

Autori:

Lelas J, Ramić S, Šarić D, Kuzmanović Elabjer B, Bušić M

Ustanova:

Klinika za očne bolesti, Klinička bolnica „Sveti Duh“, Zagreb, Medicinski fakultet Osijek, Fakultet za dentalnu medicinu i zdravstvo Osijek, Sveučilišta J.J. Strossmayera u Osijeku Referentni centar Ministarstva zdravstva za dječju oftalmologiju i strabizam

Cilj:

Utvrđiti dugoročne rezultate cross-linkinga kod pacijenata s progresivnim keratokonusom

Bolesnici i metode:

Analizirano je 38 očiju kod 38 pacijenata s progresivnim keratokonusom kod kojih je učinjen crosslinking u razdoblju od srpnja 2015. do svibnja 2016. Mjerenja su vršena nakon 1, 3 i 5 godina. Pacijentima je mjerena vrijedost vidne oštine s korekcijom, maksimalna vrijednost keratometrije (max-K), srednja vrijednost maksimalne i minimalne keratometrije (mean-K), centralna debljina rožnice (CCT) te vrijedosti prednje i stražnje zakrivljenosti. Pacijentima je učinjen crosslinking po akceleriranom protokolu.

Rezultati:

Srednja vrijednost vidne oštine s korekcijom prije crosslinkinga je bila 0,28 0,31, a nakon 5 godina 0,34 0,26. Srednja vrijednost pahimetrije se smanjila s 484 na 472 μm . Srednja vrijednost K (meanK) i max-K smanjila se za 0,122,20 D, odnosno 0,14 1,69 D.

Zaključak:

Prema našem šestogodišnjem istraživanju, liječenje progresivnog keratokonusa cross-linkingom uspješno zaustavlja progresiju bolesti

Title:

Long-term effects of corneal collagen cross-linking (CXL) in patients with keratoconus

Authors:

Lelas J, Ramić S, Šarić D, Kuzmanović Elabjer B, Bušić M

Institution:

University Eye Clinic, University Hospital "Sveti Duh", Zagreb, Faculty of Medicine Osijek, Faculty of dental medicine and health care Osijek, University Josip Juraj Strossmayer in Osijek Reference center of the Ministry of Health of the Republic of Croatia for pediatric ophthalmology and strabismus

Aim:

To evaluate the long-term effects of corneal cross-linking in patients with progressive keratoconus

Patients and methods:

38 eyes of 38 patients with progressive keratoconus were treated with CXL and were included in the study conducted between July 2015 and May 2016. We studied the patients after 1, 3 and

5 years. Patients were tested for best-corrected visual acuity (BCVA), maximum keratometry reading (max-K), average of minimum and maximum keratometry readings (mean-K), central corneal thickness (CCT), and anterior and posterior elevation at the apex. Patients underwent CXL following the accelerated procedure.

Results:

Mean best corrected visual acuity (BCVA) before CXL was 0,28 0,31, at 5 years after procedure it was 0,34 0,26. Mean CCT decreased from 484 to 472 μm . Mean-K and max-K readings have decreased by 0,122,20 D, and 0,14 1,69 D respectively.

Conclusion:

Based on our 6-year study, treatment of progressive keratoconus with cross-linking successfully halts the progression of the disease.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU MLADI U OFTALMOLOGIJI / Young Ophthalmologist Section

Titula / Title:

Dr.

Specijalizant / Resident

Ime i prezime / First and Last Name:-First

Josip

Ime i prezime / First and Last Name:-Last

Lelas

21. Škegro Ivan

Naslov:

PHACO-trabekulektomija ili operacije u etapama kod pseudoeksfolijacijskog glaukoma

Autori:

Škegro Ivan, Janroковиć Sonja, Lešin Gaćina Dina, Vidas Pauk Sania

Ustanova:

KBC Zagreb; MEF Zagreb

Cilj:

Ustanoviti razliku uspješnosti nakon kombinirane operacije PHACO-trabekulektomije kod PEX glaukoma i operacija u etapama.

Bolesnici i metode:

Istraživanje je još u tijeku i rezultati će biti objavljeni na kongresu

Rezultati:

Istraživanje je još u tijeku i rezultati će biti objavljeni na kongresu

Zaključak:

Istraživanje je još u tijeku i rezultati će biti objavljeni na kongresu

Title:

Phacotrabeculectomy vs operations in stages in pseudoexfoliation glaucoma

Authors:

Škegro Ivan, Janroковиć Sonja, Lešin Gaćina Dina, Vidas Pauk Sania

Institution:

University Hospital Centre Zagreb; Zagreb School of Medicine

Aim:

To establish the difference in results after phacotrabeculectomy and surgery in stages in PEX glaucoma.

Patients and methods:

The research is still ongoing and the results will be announced at the congress

Results:

The research is still ongoing and the results will be announced at the congress

Conclusion:

The research is still ongoing and the results will be announced at the congress

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA GLAUKOM / Glaucoma section

Titula / Title:

Dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Ivan

Ime i prezime / First and Last Name:-Last

Škegro

22. Benašić Tvrtka**Naslov:**

Rino-orbitalna mukormikoza (ROM) ko-infekcija kod pacijenta s COVID-19

Autori:

Benašić Tvrtka, Matić Suzana, Mumlek Ivan, Kopic Andrijana, Vinković Maja, Pivić-Kovačević Ivana

Ustanova:

KBC Osijek

Cilj:

Prikaz pacijenta s teškim oblikom COVID -19 infekcije i ko-infekcijom mukormikozom i posljedičnim endoftalmitisom sa zahvaćanjem orbite, sinusa i usne šupljine.

Bolesnici i metode:

-

Rezultati:

-

Zaključak:

-

Title:

Rhino-orbital mucormycosis (ROM) co-infection in severe COVID-19 patientsRh

Authors:

Benašić Tvrtka, Matić Suzana, Mumlek Ivan, Kopic Andrijana, Vinković Maja, Pivić-Kovačević Ivana

Institution:

University hospital Osijek

Aim:

-

Patients and methods:

Case report of a patient with COVID -19 and mycormycosis infection, endophthalmitis, orbital cellulitis and sinusitis.

Results:

-

Conclusion:

-

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA MREŽNICU / Retina section

Titula / Title:

Dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Tvrtka

Ime i prezime / First and Last Name:-Last

Benašić

23. Čaljkušić-Mance Tea

Naslov:

Telemedicina u oftalmologiji (retinologii)-jesmo li spremni?

Autori:

Čaljkušić-Mance Tea

Ustanova:

KBC Rijeka

Cilj:

Opisati trenutni status i mogućnosti teleoftalmologije u Hrvatskoj uključujući koristi, prepreke, trenutne programe i razvoj umjetne inteligencije

Bolesnici i metode:

Opisna studija s demografskim i kliničkim značajama pacijenata koji čekaju na pregled, a mogli bi imati koristi od teleoftalmologije.

Rezultati:

Ukratko, opisano je trenutno stanje modeliranja teleoftalmologije, oftalmološke skrbi i pretpostavljenog utjecaja na budućnost oftalmološke prakse u Hrvatskoj.

Zaključak:

Telemedicina u oftalmologiji, posebno tijekom perioda pandemije je koristan instrument za izdvajanje pacijenata koje se mora pregledati u oftalmološkoj ambulanti, bilo elektivne bilo hitne i potencijalno smanjuje rizik COVID-19 infekcije.

Title:

Telemedicine in ophthalmology (retinology)-are we prepared?

Authors:

Čaljkušić-Mance Tea

Institution:

University Hospital Rijeka

Aim:

To describe the current status and possibilities of tele-ophthalmology in Croatia including benefits, hurdles, current programs, technology and developments in artificial intelligence

Patients and methods:

Descriptive study of the demographic and clinical characteristic of patients waiting for exam who could benefit from tele-ophthalmology.

Results:

We provide a summary describing the present state of teleophthalmology modeling, care delivery and the proposed impact on the future of ophthalmology practice in Croatia.

Conclusion:

Telemedicine in ophthalmology, especially during the pandemic period is a useful instrument to filter potential face-to-

face consultation, either elective or emergency, and potentially reduce the risk of COVID-19 infection.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA MREŽNICU / Retina section

Titula / Title:

Doc.dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Tea

Ime i prezime / First and Last Name:-Last

Čaljkušić-Mance

24. Romano Vrabec

Naslov:

Povezanost između debljine sloja ganglijskih stanica i unutarnjeg pleksiformnog sloja u bolesnika s dijabetičkom retinopatijom u šećernoj bolesti tipa 2

Autori:

Romano Vrabec, Martina Tomić, Tomislav Bulum, Spomenka Ljubić

Ustanova:

Sveučilišna klinika za dijabetes, endokrinologiju i bolesti metabolizma Vuk Vrhovac, Klinička bolnica Merkur, Zagreb

Cilj:

Cilj istraživanja bio je procijeniti debljinu mrežničnog sloja živčanih vlakana (RNFL), sloja ganglijskih stanica i unutarnjeg pleksiformnog sloja (GCL-IPL), biljega mrežnične neurodegeneracije, u bolesnika sa šećernom bolešću tipa 2 (T2DM) bez dijabetičke retinopatije (DR) i s neproliferativnim DR-om (NPDR) pomoću optičke koherentne tomografije (OCT).

Bolesnici i metode:

Ovo presječno istraživanje obuhvatilo je 50 očiju od 25 T2DM prosječne životne dobi 64 godine i prosječnog trajanja dijabetesa 13 godina. Učinjen je kompletan oftalmološki pregled, uključujući i kolor fotografiju fundusa prema EURODIAB metodologiji i OCT kako bi se procijenila debljina RNFL-a i GCL-IPL-a.

Rezultati:

Pedeset očiju podijeljeno je u dvije skupine: skupina 1 (bez DR-a; n=34) i skupina 2 (NPDR; n=16). Ispitanici skupine 2 imali su dulje trajanje dijabetesa ($p=0,042$), granično češće hipertenziju ($p=0,058$) te značajno tanji GCL-IPL ($p=0,027$) nego ispitanici skupine 1. Nije primijećena razlika u RNFL-u među skupinama. GCL-IPL je bio pozitivno povezan s RNFL-om ($p<0,001$), a negativno s trajanjem dijabetesa ($p=0,042$) i DR-om ($p=0,024$). Najbolji model za predviđanje GCL-IPL-a ($R^2 = 0,176$) dobiven povratnom regresijom obuhvaćao je dob, spol i DR.

Zaključak:

Uočeno je značajno stanjenje GCL-IPL-a u bolesnika sa šećernom bolešću tipa 2 i NPDR-om, no nije utvrđena razlika u debljini RNFL-u među skupinama podijeljenima prema stupnju retinopatije.

Title:

Correlation between ganglion cell-inner plexiform layer thickness and diabetic retinopathy in type 2 diabetes

Authors:

Romano Vrabec, Martina Tomić, Tomislav Bulum, Spomenka Ljubić

Institution:

Vuk Vrhovac University Clinic for Diabetes, Endocrinology and Metabolic Diseases, Merkur University Hospital, Zagreb

Aim:

This study aimed to evaluate the thickness of the retinal nerve fiber layer (RNFL) and ganglion cell-inner plexiform layer (GCL-IPL), markers of retinal neurodegeneration, in type 2 diabetic patients (T2DM) without diabetic retinopathy (DR) and with nonproliferative DR (NPDR) using optical coherence tomography (OCT).

Patients and methods:

This cross-sectional study included 50 eyes of 25 T2DM with a median age of 64 years and a median diabetes duration of 13 years. Complete ophthalmologic examination was performed, including color fundus photography according to the EURODIAB methodology and OCT to evaluate the thickness of RNFL and GCL-IPL.

Results:

Fifty eyes were divided into two groups: group 1 (no DR; n=34) and group 2 (NPDR; n=16). Group 2 had a longer diabetes duration (p=0.042), marginally more often hypertension (p=0.058), and significantly thinner GCL-IPL (p=0.027) than group 1. No difference in RNFL was observed between groups. GCL-IPL was positively associated with RNFL (p<0.001) and negatively with diabetes duration (p=0.042) and DR (p=0.024). The best model for predicting GCL-IPL (R²=0.176) obtained by backward regression included age, gender, and DR.

Conclusion:

A significant reduction of GCL-IPL was observed in type 2 diabetic patients with NPDR, but no difference in RNFL was found among the groups regarding retinopathy status.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA MREŽNICU / Retina section

Titula / Title:

Dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Romano

Ime i prezime / First and Last Name:-Last

Vrabec

25. Pavlović Ivan

Naslov:

Subretinalna primjena tkivnog aktivatora plazminogena u liječenju akutnog submakularnog krvarenja: prikaz slučaja

Autori:

Pavlović I, Šarić B, Brzović Šarić V, Bosnar D.

Ustanova:

Klinika za očne bolesti, Klinička bolnica „Sveti Duh“, Zagreb; Medicinski fakultet Osijek, Fakultet za dentalnu medicinu i zdravstvo Osijek, Sveučilišta J.J. Strossmayera u Osijeku; Referentni centar Ministarstva zdravstva za dječju oftalmologiju i strabizam

Cilj:

Prikaz pacijenta s masivnim submakularnim krvarenjem uspješno liječenog subretinalnom primjenom tkivnog aktivatora plazminogena (tPA).

Bolesnici i metode:

Muškarac u dobi od 74 godine s anamnezom regulirane arterijske hipertenzije i fibrilacije atrijske na sistemskoj antikoagulantnoj terapiji javlja se u hitnu ambulantu uslijed naglog, bezbolnog pada vidne oštine lijevog oka. Oftalmološka anamneza bila je bez značajnih događaja, osim operacije mrežnice oba oka 8 godina ranije. Najbolja korigirana vidna oštrina na desnom oku iznosila je 0,9, a na lijevom oku 0,01 [Snellen, dec]. Kliničkim pregledom uočena je velika submakularna hemoragija lijevog oka, te je učinjena fotodokumentacija Optos California i Heidelberg Spectralis HRA+OCT uređajima. Idućeg dana učinjena je pars plana vitrektomija (PPV) s uklanjanjem unutarnje granične membrane i subretinalnom aplikacijom tPA.

Rezultati:

Na kontrolnom pregledu mjesec dana nakon operativnog zahvata zabilježeno je značajno poboljšanje vidne oštine (najbolja korigirana vidna oštrina lijevog oka 0,3). Kroz dvije godine praćenja uslijed razvoja sekundarnih komplikacija vidna oštrina je održana dodatnom intravitrealnom aplikacijom anti-vascular endothelial growth factor (anti-VEGF) terapije i triamcinolona.

Zaključak:

Prirodni tijek velikih submakularnih hemoragija u većini slučajeva završava teškim oštećenjem vida zbog hematogenog toksičnog učinka na retinu. Dostupni su brojni modaliteti liječenja za pacijente sa submakularnom hemoragijom, poput intravitrealnog anti-VEGF, pneumatske dislokacije (PD) hemoragije, intravitrealnog tPA, subretinalnog tPA, te razne kombinacije navedenih metoda. Nedavno objavljena istraživanja govore u prilog boljeg kliničkog ishoda kod primjene PPV sa subretinalnim tPA za velike submakularne hemoragije. Zaključno, rana PPV s primjenom subretinalnog tPA kod velikih submakularnih krvarenja može dovesti do značajnog poboljšanja vida.

Title:

Subretinal application of tissue plasminogen activator for the treatment of acute submacular hemorrhage: a case report

Authors:

Pavlović I, Šarić B, Brzović Šarić V, Bosnar D.

Institution:

University Eye Clinic, University Hospital "Sveti Duh", Zagreb; Faculty of Medicine Osijek, Faculty of Dental Medicine and Health Osijek, University Josip Juraj Strossmayer in Osijek; Reference Centre of the Ministry of Health of the Republic of Croatia for Pediatric Ophthalmology and Strabismus

Aim:

To report a case of acute submacular hemorrhage successfully treated with subretinal application of tissue plasminogen activator (tPA).

Patients and methods:

A 74-year-old male with a history of well-regulated hypertension and atrial fibrillation on systemic anticoagulants presented to the emergency department with an acute, painless vision loss in his left eye. Ophthalmic history was unremarkable, except for bilateral cataract surgery 8 years earlier. Best-corrected visual acuity (BCVA) was 0.9 for the right eye, and 0.01 for the left eye [Snellen, dec]. Clinical examination revealed a large submacular hemorrhage in the left eye. Fundus imaging was performed on Optos California and Heidelberg Spectralis HRA+OCT. Pars plana vitrectomy (PPV) with internal limiting membrane peeling and subretinal application of tPA was performed the following day.

Results:

One month postoperatively a marked improvement of visual acuity was noted (BCVA OS=0.3). During a two-year follow-up period the patient has developed secondary complications and the improvement of vision was sustained with intravitreal anti-vascular endothelial growth factor (anti-VEGF) and triamcinolone therapy.

Conclusion:

The natural history of large submacular hemorrhages often leads to profound vision loss as a result of hematogenous toxic effect on the retina. Nowadays, numerous therapeutic modalities are available for the treatment of submacular hemorrhages, for example intravitreal anti-VEGF, pneumatic displacement (PD) of the hemorrhage, intravitreal tPA, subretinal tPA, and their combinations. Recently published literature suggests better clinical outcomes for patients with large submacular hemorrhages after PPV and subretinal tPA. In conclusion, early PPV with subretinal tPA application can result in a significant improvement of vision in patients with a large submacular hemorrhage.

Kongres / Congresses:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU MLADI U OFTALMOLOGIJI / Young Ophthalmologist Section

Titula / Title:

Dr.

Specijalizant / Resident

Ime i prezime / First and Last Name:-First

Ivan

Ime i prezime / First and Last Name:-Last

26. Čaljkušić-Mance Tea

Naslov:

YAG laser emboliza potpomognuta hiperbaričnom oksigenacijom u liječenju okluzije retinalne arterije

Autori:

Čaljkušić-

Mance Tea, Mišljenović Vučerić Tamara, Alpeza Dunato Zvezdana, Pelčić Goran, Novak Stroligo Maja

Ustanova:

KBC Rijeka

Cilj:

Prikazati kliničku efikasnost transluminalne YAG laser embolize potpomognute hiperbaričnom oksigenacijom u liječenju retinalne arterijske okluzije s vidljivim embolusom

Bolesnici i metode:

3 pacijenta s retinalnom arterijskom okluzijom (RAO) tretirani su YAG laserom u prva 24 sata. Embolusi na račvištu arterija su dezintegrirani transluminalnom YAG laser embolizom (TLE) i upućeni na 20 tretmana hiperbarične oksigenacije (HBOT)

Rezultati:

Nakon 1 tjedna kod sva 3 pacijenta se u izvjesnoj mjeri poboljšala vidna oštrina, kao i retinalni protok krvi. Embolusi su potpuno ili djelomično iščezli i blijeda zona oko zahvaćene arterije se smanjila.

Zaključak:

TYE potpomognuta sa HBOT mogla bi predstavljati efikasnu terapiju za obnovu krvnog protoka i popravljanje vidne oštrine u slučajevima RAO uzrokovanim vidljivim embolusima.

Title:

Transluminal YAG laser embolysis (TYE) support by hyperbaric oxygen treatment (HBOT) for retinal artery occlusion (RAO)

Authors:

Čaljkušić-

Mance Tea, Mišljenović Vučerić Tamara, Alpeza Dunato Zvezdana, Pelčić Goran, Novak Stroligo Maja

Institution:

University Hospital Rijeka

Aim:

To describe the clinical efficiency of YAG laser embolysis support by hyperbaric oxygen for retinal artery occlusion with visible emboly.

Patients and methods:

3 patients with retinal artery occlusion were treated with YAG laser in first 24 hours. Platelet-fibrin emboli at the arterial bifurcation was disintegrated by transluminal YAG laser embolysis (TLE) technique and patients were referred to HBOT for 20 sessions.

Results:

One week after treatment in all three patients BCVA improved, as well as arterial blood flow. Platelet-fibrin plaques had disappeared or partly disappeared at fundus and the pale appearance in the retina had decreased.

Conclusion:

TYE support by HBOT could be an effective treatment for restoration of blood flow and vision in RAO cases caused by visible platelet-fibrin emboli.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA MREŽNICU / Retina section

Titula / Title:

Doc.dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Tea

Ime i prezime / First and Last Name:-Last

Čaljkušić-Mance

27. Čaljkušić-Mance Tea

Naslov:

Izazovi u liječenju pacijenta s CMV uveitisom

Autori:

Čaljkušić-

Mance Tea, Mišljenović Vučerić Tamara, Alpeza Dunato Zvezdana, Pelčić Goran, Novak Stroligo Maja

Ustanova:

KBC Rijeka

Cilj:

Prikazati izazove u liječenju pacijenta s imunodeficijencijom i obostranim CMV uveitisom

Bolesnici i metode:

Prikaz sučaja pacijenta s imunodeficijencijom i obostranim, ali ne istodobnim CMV uveitisom

Rezultati:

Nakon pravovremenog prepoznavanja potrebe za prilagodbom terapije , kao i uvođenjem dodatne ,CMV uveitis je dobro kontroliran uz očuvanje vidne oštine poglavito na desnom oku, dok je na lijevom zbog agresivnog oblika koji zahvaća makulu došlo do atrofije.

Zaključak:

CMV uveitis pojavljuje se kod imunokompromitiranih osoba. Ključna metoda za prevenciju razvoja težih oblika CMV uveitisa je prepoznavanje ranih manifestacija bolesti i propisivanje adekvatne terapije, kao i pravovremeno modificiranje terapije kod mogućih sistemnih i lokalnih popratnih pojava kao što su trombocitopenija i vitritis kod imunološkog oporavka.

Title:

Challenges in the treatment of a patient with CMV uveitis

Authors:

Čaljkušić-

Mance Tea, Mišljenović Vučerić Tamara, Alpeza Dunato Zvezdana, Pelčić Goran, Novak Stroligo Maja

Institution:

University Hospital Rijeka

Aim:

To show challenges in the treatment of immunocompromised patient with bilateral CMV uveitis

Patients and methods:

A case report of a patient with bilateral, but not concomitant CMV uveitis

Results:

After timely recognition of the need to adjust the therapy, as well as the introduction of additional, CMV uveitis is well controlled while maintaining visual acuity, especially in the right eye , while on the left atrophy occurred due to the aggressive type affecting the macula.

Conclusion:

CMV uveitis occurs in immunocompromised individuals. The key method for preventing severe CMV disease is recognizing the early manifestations of the disease and instituting proper therapy, as well as timely modification of therapy in possible systemic and local side effects such as thrombocytopenia and immune recovery vitritis.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA UVEA-u / Uvea section

Titula / Title:

Doc.dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Tea

Ime i prezime / First and Last Name:-Last

Caljkusic-Mance

28. Ana Pupić-Bakrač

Naslov:

Humana oftalmomijaza uzrokovana larvom *Oestrus ovis* - prvi izvještaj iz Republike Hrvatske i pregled slučajeva u mediteranskim zemaljama

Autori:

Ana Pupić-Bakrač¹, Marija Škara Kolega¹, Relja Beck²

Ustanova:

¹Odjel oftalmologije, Opća bolnica Zadar ²Odjel za bakteriologiju i parazitologiju, Hrvatski veterinarski institut

Cilj:

Oestrus ovis (ovčja nosna muha) je dvokrilac iz obitelji Oestridae sposoban inficirati ljudsko oko polažući larve i uzrokujući oftalmomijazu. Pogađa endemska područja s toplom klimom, između proljeća i jeseni. Klinički, manifestira se u vanjskom obliku koji ima blagu simptomatologiju; ili u unutarnjem obliku koji je po oko ugrožavajuće stanje. Cilj ovog rada bio je napraviti prikaz tri slučaja oftalmomijaze uzrokovane larvom *O. ovis* u Republici Hrvatskoj. Dodatno, provedena je meta-analiza svih objavljenih slučajeva u mediteranskim zemaljama.

Bolesnici i metode:

Prikaz slučajeva: Tri bolesnika, dva muškarca (dob: 30 i 52 godine) i jedna žena (dob: 76 godina) javili su se na hitni oftalmološki pregled zbog iritacije i crvenila oka. Sva tri bolesnika su navela da ih je u oko udarila muha. Pregledom na biomikroskopu uočene su male, prozirne larve s tamnom glavom, veličine 1-

2 mm, kako puzaju preko bulbarne spojnice i u području gornjeg forniksa, uzrokujući konjunktivitis i kemozu. Nakon ekstrakcije lavri pincetom, simptomi su se ubrzo povukli. Sva tri bolesnika su imala infestaciju jednom larvom. Konačna dijagnoza je postavljena nakon morfološke i molekularne identifikacije *O. ovis* larve (GenBank pristupni broj: MN845130). Zanimljivo, ovo je bila treća sekvenca *O. ovis* prijavljena u GenBank, a druga humana bazirana na COI analizi. Meta-analiza: Pregledom PubMed baze podataka u razdoblju od 1954. do siječnja 2020. godine, zabilježeno je 259 slučajeva humane *O. ovis* oftalmomijaze u mediteranskim zemljama, a dijagnoza je temeljena na morfološkoj i/ili molekularnoj identifikaciji parazita.

Rezultati:

Ukupno 261 bolesnika je imao vanjski, dok je jedan bolesnik imao unutarnji oblik okularne mijaze uzrokovane larvom *O. ovis*. Najveći broj prijavljenih slučajeva zabilježen je u Libiji (N=121), Tunisu (N=38), Turskoj (N=30) i Italiji (N=28). Osjećaj stranog tijela/iritacija i crvenilo/hiperemija oka su bili najčešći simptomi i znakovi vanjske *O. ovis* oftalmomijaze, zabilježeni kod >85%, odnosno >75% bolesnika. U većini slučajeva, infestacija larvama se dogodila u ruralnim sredinama, za vrijeme toplih ljetnih mjeseci, na temperaturi između 24 i 28 °C, u uvjetima blažeg vjetra i vlažnosti zraka između 40 i 80%.

Zaključak:

Republika Hrvatska predstavlja endemsko područje za humanu *O. ovis* oftalmomijazu, poput većine zemalja na Mediteranu. Manjak svijesti o ovom parazitu je mogući razlog zbog čega okularna mijaza nije ranije prijavljena u Republici Hrvatskoj. Osim toga, globalno zatopljenje uvjetuje povećanje prevalencije *O. ovis* mijaze u životinja i ljudi, što je moguće objašnjenje zašto ova bolest postaje emergentna zoonoza u Republici Hrvatskoj.

Title:

HUMAN OPHTHALMOMYIASIS CAUSED BY OESTRUS OVIS—
FIRST REPORT FROM CROATIA AND REVIEW ON CASES FROM MEDITERRANEAN COUNTRIES

Authors:

Ana Pupić-Bakrač¹, Marija Škara Kolega², Relja Beck

Institution:

¹Department of Ophthalmology, General Hospital Zadar ²Department for Bacteriology and Parasitology, Croatian Veterinary Institute

Aim:

Oestrus ovis (the sheep nasal bot fly) is dipteran from Oestridae family able to infect the human eye by depositing larvae and causing ophthalmomyiasis. It occurs in endemic areas with warm climate, between spring and autumn. Clinically, it manifests in external form which has mild symptomatology; or in internal form which represents eye compromising condition. The purpose of current study was to make report on three cases of ophthalmomyiasis caused by *O. ovis* in Croatia. Additionally, meta-analysis of published cases from all countries in Mediterranean was conducted.

Patients and methods:

Case series: Three patients, two males (age: 30 and 52 years) and one female (age: 76 years) came to urgent ophthalmic examination for irritation and redness of the eye. All three patients reported being stung on the eye by a fly. On slit-lamp examination, tiny, translucent larvae with dark head, 1–2 mm in size, were seen crawling over the bulbar conjunctiva and in upper fornix, causing conjunctivitis and chemosis. Symptoms resolved shortly after extraction of larvae using hook forceps. All patients had infestation with single larva. Final diagnosis was set after morphological and molecular confirmation of *O. ovis* first instar (GenBank accession number: MN845130). Interestingly, this was third sequence deposited in GenBank of *O. ovis* and second human-based on COI analysis. Meta-analysis: Reviewing a PubMed database in the period between 1954 and January 2020, 259 cases of human *O. ovis* ophthalmomyiasis have been reported in countries of Mediterranean basin, based on morphological and/or molecular confirmation of parasite.

Results:

A total of 261 cases had external, while one had internal form of ocular myiasis caused by *O. ovis*. The highest number of reported cases were published in Lybia (N=121), Tunisia (N=38), Turkey (N=30) and Italy (N=28). Foreign body sensation/irritation and redness/hyperemia were most common symptoms and signs of human *O. ovis* external ophthalmomyiasis, observed in >85% and >75% of cases, respectively. In majority of cases, larviposition occurred in rural areas, during warm summer months, between 24 and 28 °C, under conditions of calm wind and relative humidity of 40–80%.

Conclusion:

Croatia represents endemic area for human *O. ovis* ophthalmomyiasis, like most of the countries in the Mediterranean basin. The possible reason that ocular myiasis is not reported earlier in Croatia is due to awareness. In addition, global warming predisposes increase of *O. ovis* prevalence, both in animals and humans, which could be another explanation why it became emerging zoonosis in Croatia.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU MLADI U OFTALMOLOGIJI / Young Ophthalmologist Section

Titula / Title:

Dr.

Specijalizant / Resident

Ime i prezime / First and Last Name:-First

Ana

Ime i prezime / First and Last Name:-Last

Pupić-Bakrač

29. Ivanišević Kristina

Naslov:

Prikaz slučaja 29-godišnjeg muškarca s „White dot“ sindromom (WDS)

Autori:

Ivanišević K, Vuković A, Medić A, Čulina K, Jukić T.

Ustanova:

Ordinacija za očne bolesti dr. Ante Vuković, Očna poliklinika Medić Jukić

Cilj:

Prikazati slučaj bilateralnog „White dot“ sindroma u 29-godišnjeg muškarca.

Bolesnici i metode:

Dvadesetdevetogodišnji muškarac javlja se na pregled u oftalmološku ordinaciju zbog pojave fo topsija i skotoma u temporalnom dijelu vidnog polja desnog oka, koji su se pojavili dva dana ran ije. Do sada zdrav, nije oftalmološki liječen, emetrop. Dijagnostička obrada uključila je: pregled v idne oštrine, aplanacijsku tonometriju, pregled na biomikroskopu, Ishihara test, klinički pregled očne pozadine u midrijazi, optičku koherentnu tomografiju (OCT), vidno polje (VP) i fluoresceins ku angiografija (FAG).

Rezultati:

Na prvom pregledu obostrana vidna oštrina je iznosila 1,0 bez korekcije. Klinički nalaz prednjeg segmenta oka bio je obostrano uredan. Pregledom očne pozadine na desnom su oku uočeni bl agi vitritis, a na stražnjem polu višebrojne diskretne neoštro ograničene blijedobijele točke (whit e dots, WD) s pošteđenom foveolarnom regijom, blaga hiperemija glave vidnog živca (PNO) i per ipapilarni edem. Vitrealni prostor lijevog oka bio je miran, a na stražnjem polu rijetke WD, foveol arna regija urednog nalaza, PNO jasnih granica, peripapilarno diskretno bljeđa. OCT makula po kazao je desno disrupcija elipsoidne zone (EZ) IS/OS segmenta u nazalnom dijelu makularne lož e. OCT makule OS bio je gotovo uredan, sa diskretnim promjenama EZ , IS/OS peripapilarno. OCT PNO pokazao je edem desno, uz prosječnu debljinu RNFL 270 µm/120 µm i C/D 0,06/0,40. Vidno polje desnog oka pokazalo je uvećanu slijepu pjegu. Nalaz FAG desno pokazao je multifo kalne lezije sa „wreath-like“ hiperfluorescencijom u ranoj fazi, te hiperfluorescenciju i „staining“ u kasnoj fazi uz kasni „l eakage“ na PNO, a na lijevom oku ostatne diskretne promjene nazalno. Navedenim je potvrđen a dijagnoza Multiple Evanescent White Dot Syndrome (MEWDS). Dva tjedna nakon prvog dolask a, bolesnik navodi subjektivno poboljšanje i izostanak ranije navedenih simptoma, a klinički se u tvrdi regresija lezija stražnjeg pola.

Zaključak:

Multiple Evanescent White Dot Syndrome (MEWDS) je rijedak samolimitirajući poremećaj dobro g ishoda s oporavkom unutar 1 do 2 tjedna, a diferencijalno dijagnostički potrebno je isključiti in fektivnu, autoimunu i neoplastičnu („masquerade“) etiologiju.

Title:

Case report of a 29-year-old man with White Dot Syndrome (WDS)

Authors:

Ivanišević K, Vuković A, Medić A, Čulina K, Jukić T.

Institution:

Ophthalmology office Dr. Ante Vuković, Eye clinic Medić Jukić

Aim:

To present a case of bilateral "white dot" syndrome in a 29-year-old man

Patients and methods:

A twenty-nine-year-

old man underwent a medical examination in the ophthalmology office due to the appearance of photopsies and scotomas in the temporal part of the visual field of the right eye that had appeared two days prior. Being healthy and emetrope, the patient had no previous ophthalmological treatments. The examination included: visual acuity, applanation tonometry, slit lamp examination, Ishihara test, clinical examination of the posterior eye segment in mydriasis, optical coherence tomography (OCT), visual field (VF), fluorescein angiography (FA).

Results:

Results: Upon arrival, the patient had a visual acuity of both eyes of 1.0 without correction. The clinical finding of the anterior segment was neat on both eyes. Clinical examination of the posterior eye segment of the right eye revealed mild vitritis, posterior segment showed multiple discrete unsharp pale white dots (WD) with spared foveolar region, mild optic disc (PNO) hyperemia and peripapillary edema. The vitreal space of the left eye was quiet, the posterior pole showed rare WD and discrete peripapillary palor. Macular OCT finding of the right eye revealed disruption of the ellipsoidal zone (EZ) of the IS / OS segment in the nasal part of the macula. Left eye OCT was unremarkable with discrete peripapillary changes of the same pattern. The OCT imaging of the PNO confirmed edema on the right eye with the average RNFL thickness of 270 µm/120 µm and C/D 0,06/0,40. The visual field test revealed enlarged blind spot of the right eye. The right eye FA showed multifocal lesions with "wreath-like" hyperfluorescence in the early phase, and hyperfluorescence and "staining" in the late phase with late "leakage" from the PNO and discrete residual changes in the nasal side of the left eye. These diagnostic procedures confirmed the diagnosis of Multiple Evanescent White Dot Syndrome (MEWDS). Two weeks after the first arrival, the patient stated a subjective improvement and the absence of the previously mentioned symptoms and examination of the posterior pole showed almost complete regression of the lesions.

Conclusion:

Multiple Evanescent White Dot Syndrome (MEWDS) is a rare self-limiting disorder with a good outcome and recovery within 1 to 2 months. It is the result of idiopathic inflammation of the outer retina layers and it is important to differentially exclude the infectious, autoimmune and neoplastic ("masquerade") etiology.

Kongres / Congress:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA UVEA-u / Uvea section

Titula / Title:

Dr.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Kristina

Ime i prezime / First and Last Name:-Last

Ivanišević

30. Zlatar Mirna

Naslov:

Svijest o smjernicama i stavovima EUGOGO-
a u vezi s pušenjem kod Gravesove orbitopatije među liječnicima u Hrvatskoj

Autori:

Zlatar Mirna, Jelena Juri Mandić, Maja Baretić, Sanja Kusačić Kuna

Ustanova:

KBC Zagreb

Cilj:

2008.g. EUGOGO (Europska grupa za Gravesovu orbitopatiju) objavljuje zajedničku izjavu o liječenju GO (Gravesove orbitopatije), a 2016. g. smjernice za liječenje GO koje su od tada široko rasprostranjene. Imajući u vidu da opća percepcija i praktična upotreba EUGOGO smjernica među hrvatskim kliničarima nisu bili poznati, proveli smo istraživanje kojim smo ocijenili svijest i praktičnu uporabu smjernica EUGOGO među liječnicima koji sudjeluju u liječenju Gravesove bolesti u svakodnevnoj praksi. Također, ideja je bila istražiti njihov stav prema važnosti pušenja kao važnog faktora rizika za razvoj i tijek GO.

Bolesnici i metode:

Provedena je anonimna internetska anketa u kojoj je sudjelovalo 100 liječnika, od toga 40 oftalmologa, 36 endokrinologa i 24 liječnika nuklearne medicine. Srednja dob ispitanika je bila 51,15 godina, 68 % su bile žene. Dva glavna pitanja studije su bila: "Koristite li smjernice EUGOGO - a u svakodnevnoj praksi za dijagnosticiranje i liječenje GO?" i "Znate li koji su čimbenici prema smjernicama EUGOGO -a povezani s progresijom i ishodom liječenja u GO?".

Rezultati:

51,5 % sudionika koristi smjernice EUGOGO-
a u svakodnevnoj praksi za dijagnosticiranje i liječenje GO. 92,6 % sudionika smatra da su smjernice EUGOGO -
a korisne u praksi. 69,5 % prepoznaje pušenje kao čimbenik rizika koji određuje ishod bolesti.

Zaključak:

Smjernice EUGOGO -
a napravljene su s ciljem što ranijeg uspostavljanja odgovarajuće dijagnoze i boljeg liječenja bolesnika s GO. Većina hrvatskih kliničara uključenih u liječenje GO bila je svjesna povezanosti pušenja i razvoja GO. Gotovo polovica hrvatskih liječnika uključenih u liječenje GO koristi smjernice EUGOGO -a i većina ih smatra korisnim u svakodnevnoj praksi. Praćenje EUGOGO smjernica predstavlja najbolju kliničku praksu za liječnike koji liječe GO. Kontinuirana edukacija i primjena smjernica EUGOGO -
a u kliničkoj praksi neophodni su u postizanju pravovremenog, modernog i učinkovitog liječenja bolesnika sa GO.

Title:

Awareness of EUGOGO guidelines and attitudes regarding smoking in Graves' orbitopathy in Croatia

Authors:

Zlatar Mirna, Jelena Juri Mandić, Maja Baretić, Sanja Kusačić Kuna

Institution:

University Hospital Centre Zagreb

Aim:

In 2008 (European group on Graves' orbitopathy) published consensus statement on the management of GO and in 2016 EUGOGO published guidelines for the management of GO that was widespread ever since. Having in mind that general perception and practical usage of the statement amongst Croatian clinicians was unknown, we conducted a survey evaluating the awareness and practical usage of the EUGOGO guidelines among physicians treating Graves' disease in daily practice. Also, the idea was to explore their attitude towards importance of smoking as a risk factor for GO.

Patients and methods:

An internet based, anonymous online survey was conducted from 100 clinicians in which participated 40 ophthalmologists, 36 endocrinologists and 24 nuclear medicine specialists. Median age of participants was 51.15 years, 68 % were females. Two main questions of this study were: "Do you use EUGOGO guidelines in daily practice for diagnosis and treatment of GO?" and "Do you know which factors according to EUGOGO guidelines are associated with progression and outcome of the treatment in GO?".

Results:

51.5 % of the participants use EUGOGO guidelines in daily practice for diagnosis and treatment of GO. 92.6 % of the participants find EUGOGO guidelines useful in practice. 69.5 % recognize smoking as risk factors determining the outcome of the disease.

Conclusion:

EUGOGO guidelines were made with the aim to provide proper diagnosis and treatment for patients with GO. Most of Croatian clinicians involved in the treatment were aware of the association between smoking and the development of GO. Almost a half of Croatian clinicians involved in treatment of the disease use EUGOGO guidelines and most of them consider them useful in everyday practice. Following the guidelines represents best clinical practice for the physicians treating GO. Continuous education and clinical practice application of EUGOGO guidelines are mandatory to provide modern and efficient treatment.

Kongres / Congress:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA ORBITU / Orbit section

Titula / Title:

Dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Mirna

Ime i prezime / First and Last Name:-Last

Zlatar

31. Borjan Ivan

Naslov:

Iris claw intraokularna leća u liječenju postoperativne afakije

Autori:

Borjan Ivan, Stanić Robert, Pleština-Borjan Ivna, Bućan Ivona, Bućan Kajo

Ustanova:

Klinika za očne bolesti, KBC Split

Cilj:

Prikazati rezultate sekundarne implantacije iris claw Artisan/Verisyse intraokularne leće (IOL) u prednju očnu sobicu u afaknim očima bez primjerene potpore stražnje kapsule.

Bolesnici i metode:

U ovu retrospektivnu studiju uključeno je 29 postoperativnih afaknih očiju u 28 bolesnika koji su podvrgnuti sekundarnoj implantaciji Artisan/Verisyse iris claw IOL- a u prednju očnu sobicu u periodu od 5 godina (od siječnja 2016. do siječnja 2021.) u Klinici za očne bolesti KBC-

a Split. Sve zahvate je izveo isti operater. Kriteriji uključenja u istraživanje bili su: afakija bez dovoljne potpore stražnje kapsule, dubina očne sobice veća od 3 mm i dob bolesnika viša od 18 godina. Bolesnici sa nereguliranim glaukomom, uveitisom, makularnim edemom (CME), dekompenziranom rožnicom te nedostatnim tkivom šarenice nisu uključeni u istraživanje. Kod svih bolesnika je prije operacijskog zahvata urađen detaljan oftalmološki pregled uključujući najbolje korišćenu vidnu oštrinu (BCVA), mjerenje intraokularnog tlaka (IOP), pregled na biomikroskopu, pregled fundusa i mjerenje broja endotelnih stanica rožnice (cECC). Izračun snage intraokularne leće izvršen je uređajem Nidek AL – scan optical biometer koristeći SRK-

T formulu. Makularni edem procjenjivan je klinički i optičkom koherentnom tomografijom (OCT). Kirurški zahvati rađeni su u parabolbarnoj anesteziji. Iris claw leća je ugrađena u prednju očnu sobicu, centrirana ispred zjenice, sa hapticima fiksiranim na prednjoj površini šarenice u poziciji 3 i 9 sati. U svih bolesnika urađena je periferna iridektomija na 12 sati u cilju prevencije sekundarnog glaukoma. Bolesnici su postoperativno praćeni najmanje 6 mjeseci. BCVA, IOP i cECC su mjereni prije operacije i 6 mjeseci nakon operacije. Provedena je statistička analiza, rezultati su interpretirani na razini statističke značajnosti $p < 0,05$.

Rezultati:

Istraživanje je uključilo 29 afaknih očiju, u 28 bolesnika (jedan je bolesnik imao obostranu postoperativnu afakiju), od kojih je bilo 17 (59%) muškaraca i 12 (41%) žena. Prosječna dob bolesnika bila je 70 ± 16 godina. Desno oko je bilo zahvaćeno u 13 (45%) a lijevo u 16 (55%) bolesnika. Najčešći razlozi neuspjele primarne implantacije IOL-

bili su traumatska mrena, hipermaturna mrena s uskom zjenicom te pseudoeksfolijacijski sindrom. Kod 6 (21%) bolesnika trauma je prethodila operativnom zahvatu. Devetnaest (66%) bolesnika je liječilo glaukom. Prosječno vrijeme od primarne do sekundarne operacije iznosilo je 4 m

eseca. Svi bolesnici su pokazali značajno postoperativno poboljšanje BCVA ($p=0,000382$) koje je ispitivano 6 mjeseci nakon operativnog zahvata. Šest mjeseci nakon operacije 17 (59%) bolesnika je imalo vidnu oštrinu jednaku ili bolju od 0,5. Broj endotelnih stanica se smanjio prosječno za 9,2% 6 mjeseci poslije zahvata. Nisu primijećene ozbiljne intra i postoperativne komplikacije u promatranoj skupini bolesnika. Jedan bolesnik je imao povišen IOP (dobro kontroliran lokalnom antiglaukomskom terapijom), jedan je imao CME, a jedan postoperativno hifemu. U dva bolesnika intraokularna iris claw leća se dislocirala u vremenu praćenja.

Zaključak:

Sekundarno implantirana iris claw leća u prednju očnu sobicu može biti sigurna, brza i učinkovita metoda u korekciji postoperativne afakije u očima bez kapsularne potpore ako je izvede vješt i iskusan operater.

Title:

Iris claw intraocular lens in correcting postoperative aphakia

Authors:

Borjan Ivan, Stanić Robert, Pleština-Borjan Ivna, Bućan Ivona, Bućan Kajo

Institution:

Department of Ophthalmology, University Hospital Center Split

Aim:

To present the results of secondary iris claw Artisan/Verisyse intraocular lens (IOL) implantation in the anterior chamber (AC) in aphakic patients without sufficient posterior capsular support.

Patients and methods:

This retrospective study included 29 postoperative aphakic eyes of 28 patients subjected to the secondary implantation of Artisan/Verisyse iris claw IOL in AC during the period of 5 years (from January 2016 to January 2021) in the Eye Clinic, Clinical Hospital Centre Split. All the procedures were done by the same surgeon. The inclusion criteria were: aphakia without posterior capsular support, anterior chamber depth below 3 mm and age over 18 years. Patients with uncontrolled glaucoma, decompensated cornea, uveitis, macular edema and insufficient iris tissue were excluded. All patients had detailed ophthalmologic examination before the surgery including best corrected visual acuity (BCVA), intraocular pressure (IOP) measurement, slit lamp examination, fundus examination and corneal endothelial cells count (cECC) measurement. The calculation of the IOL power was done with Nidek AL – scan optical biometer using the SRK-T formula. The assessment of macular edema was done fundoscopically and was also measured by optical coherent tomography (OCT). Surgical procedure was performed under parabulbar anesthesia. Iris claw IOL was inserted into the AC, centered over pupil with haptics at 3 and 9 o'clock position. The haptics were fixed to the anterior surface of the iris with enclavation needle. In all patients peripheral iridectomy on 12 o'clock position was performed to prevent secondary glaucoma. All patients were followed for at least six months postoperatively. BCVA, IOP and cECC were analyzed before the surgery and 6 months after the surgery in all patients. The level of statistical significance was set to $p < 0.05$.

Results:

The study included 29 aphakic eyes of 28 patients (in one patient postoperative aphakia was present in both eyes), 17 (59%) of them were male, and 12 (41%) were female. The average age of patients was 70 ± 16 years. Right eye was affected in 13 (45%) and the left eye in 16 (55%) patients. The most common reasons for failed primary IOL implantation were: traumatic cataract, hypermature cataract with narrow pupil and pseudoexfoliation syndrome. Six (21%) patients had p

reoperative trauma. Nineteen (66%) patients were treated for glaucoma before the surgery. The average time between primary and secondary procedure was 4 months. All patients have showed a significant improvement in BCVA ($p=0.000382$) measured 6 months after the surgery. Six months after the implantation BCVA was 0.5 or better in 17 (59%) patients. Mean cECC loss was 9.2% six months postoperatively. No serious intra and postoperative complications were observed in the study group. One patient had elevated IOP value, but it was put under control with local antiglaucoma therapy. Cystoid macular edema was observed in one patient. One patient had hyphema postoperatively. In two eyes IOL was dislocated during the follow-up period.

Conclusion:

Secondary iris claw (Aritasn/Verisyse) IOL implantation in AC can be a safe and effective option in correcting surgical aphakia in eyes without capsular support if it is done by a skillful and experienced surgeon.

Kongres / Congresse:

20. Kongres HOOD-a

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Ivan

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Borjan

32. Sarajčev Dean

Naslov:

Učinak botulinum toksina tipa-A u bolesnika s esencijalnim blefarospazmom

Autori:

Sarajčev D, Gaćina K, Lešin M

Ustanova:

Klinika za očne bolesti KBC Split

Cilj:

Cilj ovog istraživanja bio je utvrditi učinak botulinum toksina tipa A i zadovoljstvo kod pacijenata s esencijalnim blefarospazmom

Bolesnici i metode:

U ovo prospektivno eksperimentalno istraživanje uključeno je 12 ispitanika koji boluju od esencijalnog blefarospazma te im je primjenjena terapija injekcijama botulinum toksina tipa-A. Istraživanje se provodilo na Klinici za očne bolesti Kliničkog bolničkog centra Split u razdoblju od prosinca 2019. do lipnja 2021. godine. U studiju je uključeno 11 žena i 1 muškarac u dobi od 49 do 86 godina. Ispitanicima je prije te dva do tri tjedna nakon aplikacije dana anketa u kojoj se pitanja odnose na kvalitetu života i uključuju poteškoće pri čitanju, vožnji, gledanju televizije, izvođenju svakodnevnih aktivnosti, šetanju i kupovini u dućanu. Također im je dana ljestvica "Jankovic Rating Scale" u kojoj se pitanja odnose na ozbiljnost i učestalost simptoma. U terapiji se koristio botulinum toksin tipa A (Botox) koji smo razrijedili s 4 ml fiziološke otopine, tako da je u inzulinskoj brizgalici s integriranom iglom, od jednog mililitra 25 jedinica lijeka. Svi pacijenti su dobili po 25 jedinica po strani, u pet točaka (5 jedinica po točki) subkutano i to na dva mjesta na gornjoj vjeđi, zatim u središnjem području m. orbicularis oculi na donjoj vjeđi te u dvije točke u lateralnom dijelu mišića.

Rezultati:

Ukupna razina poteškoća snižena je (3,0 (2,2-3,2) vs. 1,6 (0,6-1,8)), odnosno kvaliteta života je narasla nakon primjene botulinum toksina, te je ispitivanjem utvrđeno da je porast statistički značajan ($P=0,003$). Ozbiljnost simptoma nakon primjene botulinum toksina snižena je (3,5 (3,0-4,0) vs. 2,0 (1,0-2,0)), što znači da je došlo do smanjenja ozbiljnosti poteškoća, te je ispitivanjem utvrđeno postojanje statistički značajne razlike ($P=0,003$). Učestalost simptoma je nakon primjene botulinum toksina snižena (3,0 (3,0-3,0) vs. 1,0 (1,0-2,5)), te je ispitivanjem utvrđeno postojanje statistički značajne razlike ($P=0,012$).

Zaključak:

Iz rezultata ovog istraživanja možemo utvrditi da primjenom botulinum toksina tipa-A dolazi do povećanja kvalitete života, te da se ozbiljnost i učestalost simptoma statistički značajno smanjuju.

Title:

The effect of botulinum toxin type-A in patients with essential blepharospasm

Authors:

Sarajčev D, Gaćina K, Lešin M

Institution:

Department of Ophthalmology, University Hospital Center Split

Aim:

The aim of this study was to determine the effect of botulinum toxin type A and satisfaction in patients with essential blepharospasm.

Patients and methods:

This prospective experimental study included 12 subjects suffering from essential blepharospasm who received therapy with botulinum toxin type-

A injections. The research was conducted at the Department of Ophthalmology of University Medical Center split between December 2019 and June 2021. The study included 11 women and 1 man aged 49 to 86 years. Respondents were given a survey before and two to three weeks after the procedure in which were questions related to quality of life including difficulties in reading, driving, watching television, doing everyday activities, walking and shopping in the store. They were also given a "Jankovic Rating Scale" with questions related to the severity and frequency of symptoms. Botulinum toxin type-

A (Botox) was used in the therapy and was diluted with 4 ml of physiological solution, so that in an insulin syringe with an integrated needle, there are 25 units of the drug from one milliliter. All patients received 25 units per side, at five points (5 units per point) subcutaneously in two places on the upper eyelid, then in the central area of the m. orbicularis oculi on the lower eyelid and at two points in the lateral part of the muscle.

Results:

The overall level of difficulties was reduced (3,0 (2,2-3,2) vs. 1,6 (0,6-1,8)), meaning the quality of life increased after the application of botulinum toxin, and the study found that the increase was statistically significant (P = 0.003). The severity of symptoms after the application of botulinum toxin was reduced (3,5 (3,0-4,0) vs. 2,0(1,0-2,0)), which means that there was a decrease in the severity of the difficulties, and the study found a statistically significant difference (P=0,003). The frequency of symptoms was reduced after botulinum toxin administration (3,0 (3,0-3,0) vs. 1,0 (1,0-2,5)), and the study revealed a statistically significant difference (P = 0.012).

Conclusion:

From the results of this study, we can determine that the use of botulinum toxin type-A increases the quality of life, and that the severity and frequency of symptoms are statistically significantly reduced.

Kongres / Congresse:

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33. Cigić Valentina

Naslov:

Dermis-fat presadak u okuloplastičnoj kirurgiji: prikaz slučaja

Autori:

Cigić V, Kuzmanović Elabjer B, Bušić M, Miletić D, Pleše A

Ustanova:

Klinika za očne bolesti, Klinička bolnica „Sveti Duh“, Zagreb, Medicinski fakultet Osijek, Fakultet za dentalnu medicinu i zdravstvo Osijek, Sveučilišta J.J. Strossmayera u Osijeku Referentni centar Ministarstva zdravstva za dječju oftalmologiju i strabizam

Cilj:

prikazati uporabu dermis-

fat presatka za nadomjestak spojnice i orbitalnog volumena sekundarno nakon masivne dehiscencije spojnice iznad silikonskog orbitalnog implantata.

Bolesnici i metode:

Pacijentica u dobi od 32 godine dolazi na drugo mišljenje s masivnom dehiscencijom spojnice iznad silikonskog orbitalnog implantata i ponavljajućim orbitalnim celulitisom. Primarna evisceracija oka s ugradnjom orbitalnog implantata veličine 18 mm učinjena je u drugoj ustanovi prije deset godina zbog traume. Tijekom zahvata na našoj Klinici, kompletno se odstranila dehiscirana spojnica i uklonio silikonski orbitalni implantat. Po uzimanju obriska unutarnje površine sklere, učinjena je peritomija i tenotomija, te sklerotomija u obliku četiri latice cvijeta između ravnih i ekstraokularnih mišića sve do optičkog živca po metodi Sales-Sanz a i Sanz-Lopez. Posteriorno, svaka od latica odvojila se od očnoga živca koji se izreže. Tako su dobivena četiri slobodna skleralna režnja, od kojih je svaki sadržavao jedan ravni mišić.

Rezultati:

Iza skleralnih režnjeva duboko u orbitu implantirao se novi silikonski implantat promjera 20 mm, a skleralni režnjevi su se prešili jedan preko drugog ispred implantata. Dermis-fat presadak uzet je s lijeve strane donjeg abdomena. Vitalna spojnica se pojedinačnim 6/0 resorptivnim šavima šivala 2 mm preko ruba prema središtu presatka kako bi se osigurala epitelizacija koja je nastupila unutar 8 tjedana.

Zaključak:

Dermis-fat presadak je jedina tehnika koja osigurava istodobni nadomjestak spojnice i volumena orbite, čak i kao sekundarni orbitalni implantat s odličnim funkcionalnim i kozmetičkim ishodom.

Title:

Dermis fat graft in oculoplastic surgery: case report

Authors:

Cigić V, Kuzmanović Elabjer B, Bušić M, Miletić D, Pleše A

Institution:

University Eye Clinic, University Hospital "Sveti Duh", Zagreb, Faculty of Medicine Osijek, Faculty of dental medicine and health care Osijek, University Josip Juraj Strossmayer in Osijek Reference center of the Ministry of Health of the Republic of Croatia for pediatric ophthalmology and strabismus

Aim:

Demonstration of the usage of a dermis-fat graft for conjunctiva and orbital volume replacement secondary to massive conjunctival dehiscence overlying the silicone orbital implant.

Patients and methods:

A 32-year-old patient came seeking a second opinion on massive conjunctival dehiscence above a silicone orbital implant and recurrent orbital cellulitis. The primary evisceration of the eye with the installation of an 18 mm orbital implant was performed about ten years ago due to trauma in another institution. During the procedure at our Clinic, the necrotic conjunctiva was completely removed and the silicone orbital implant was removed. After taking a swab of the inner surface of the sclera, a peritomy and tenotomy were performed, as well as a sclerotomy in the form of four lower petals between the extraocular muscles to the optic nerve by the Sales-Sanz and Sanz-Lopez method. Posteriorly, each of the petals separated from the optic nerve which was excised. Thus, four free scleral flaps were obtained, each containing one extraocular muscle.

Results:

Behind the scleral flaps, a new silicone implant with a diameter of 20 mm was implanted deep into the orbit, and the scleral flaps were sutured to each other in front of the implant. A dermis-fat graft was taken from the left side of the lower abdomen. The vital conjunctiva was sutured 2 mm over the edge towards the center of the graft with individual 6/0 resorptive sutures to ensure epithelialization that occurred within 8 weeks.

Conclusion:

A dermis-fat graft is the only technique that provides simultaneous replacement of the conjunctiva and orbital volume, even as a secondary orbital implant with the excellent functional and cosmetic outcomes.

Kongres / Congresse:

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34. Bušić Iva

Naslov:

Enukleacija kod sumnje na infiltraciju vidnog živca tumorom

Autori:

Bušić I, Kuzmanović Elabjer B, Bjeloš M, Cigić V, Bušić M

Ustanova:

Klinika za očne bolesti, Klinička bolnica „Sveti Duh“, Zagreb, Medicinski fakultet Osijek, Fakultet za dentalnu medicinu i zdravstvo Osijek, Sveučilišta J.J. Strossmayera u Osijeku Referentni centar Ministarstva zdravstva za dječju oftalmologiju i strabizam

Cilj:

Prikazati enukleaciju kod sumnje na infiltraciju vidnoga živca retinoblastomom u stadiju E

Bolesnici i metode:

Enukleacija kod sumnje na infiltraciju vidnoga živca tumorom je miokonjunktivalna tehnika kojom se nastoji ekscidirati adekvatna retrobulbarna duljina živca od 15 mm ili veća, uz nježnu manipulaciju, kako bi se spriječila perforacija očne jabučice. Jednogodišnjem dječaku dijagnosticiran je retinoblastom lijevog oka, bez diseminacije. Prema klasifikaciji IIRC (engl. International Intraocular Retinoblastoma Classification) radilo se o tumoru stadija D te je inicijalno bilo započeto liječenje sistemskom kemoterapijom (etopozidom i karboplatinom). Kako dođe do prelaska tumora u stadij E, odlučio se za sekundarnu enukleaciju. Peritomija se započela nazalno uz markiranje spojnice šavom. Po peritomiji učinila se cirkularno tenotomija, markiran je gornji ravni rektus, te su se mišićnim kukama izolirali svi ravni mišići. Na 2-3 mm od hvatišta mišića na bulbus postavio se trakcijski šav, od kojeg se, udaljeno 4-5 mm postavio resorptivni šav.

Rezultati:

Kad su se postavila sva četiri trakcijska šava, presjekao se donji i gornji kosi mišić kako bi se oslobodio bulbus. Nakon povlačenja bulbusa prema van, vidni živac se presiječe na udaljenosti većoj od 15 mm od ulaska u bulbus. Različitim bojama markirani su bataljci ekstraokularnih mišića za patohistološku analizu.

Zaključak:

Enukleacija s minimalno 15 mm vidnoga živca uz nježnu manipulaciju omogućuje prevenciju intraoperativne diseminacije tumora, kao i detekciju eventualne tumorske infiltracije vidnoga živca.

Title:

Enucleation in suspected optic nerve infiltration by tumor

Authors:

Bušić I, Kuzmanović Elabjer B, Bjeloš M, Cigić V, Bušić M

Institution:

University Eye Clinic, University Hospital "Sveti Duh", Zagreb, Faculty of Medicine Osijek, Faculty of dental medicine and health care Osijek, University Josip Juraj Strossmayer in Osijek Reference center of the Ministry of Health of the Republic of Croatia for pediatric ophthalmology and strabismus

Aim:

To show enucleation in suspected optic nerve infiltration by stage E retinoblastoma

Patients and methods:

Enucleation in suspected optic nerve infiltration by a tumor is a myoconjunctival technique that used to excise an adequate retrobulbar nerve preferably at the length of 15 mm or greater, with gentle manipulation, to prevent bulbar perforation. A one-year-old boy was diagnosed with retinoblastoma of the left eye, without dissemination. According to the IIRC (International Intraocular Retinoblastoma Classification), it was a stage D tumor and treatment with systemic chemotherapy (etoposide and carboplatin) was initiated. As the tumor progressed to stage E, a secondary enucleation was decided. Peritomy began nasally with suture marking of the joint. After peritomy, a circular tenotomy was performed, the upper straight rectus was marked, and all straight muscles were isolated with muscle hooks. A traction suture was placed on the bulbus, 2-3 mm from the muscle grip, and resorptive suture was placed 4-5 mm away.

Results:

When all four traction sutures were placed, the lower and upper oblique muscles were cut to release the bulbus. After pulling the bulbus outwards, the optic nerve was cut at a distance greater than 15 mm from the entrance to the bulbus. Battles of extraocular muscles were marked with different colors for pathohistological analysis.

Conclusion:

Enucleation with a minimum length of 15 mm of the optic nerve with gentle manipulation allows the prevention of intraoperative tumor dissemination, as well as the detection of possible tumor or infiltration of the optic nerve.

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Abstract category / Sažetak prijavljujem u:

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35. Tadić Ivana

Naslov:

Stvarna dijagnoza u pet bolesnika sa sumnjom na maligni melanom srednje očne ovojnice

Autori:

Tadić I, Olujić I, Bućan K, Pleština-Borjan I

Ustanova:

Klinika za očne bolesti, KBC Split

Cilj:

Analizirati dijagnostičke postupke i mogućnosti u procesu postavljanja stvarne dijagnoze u pet bolesnika upućenih gotovo istovremeno u Kliniku za očne bolesti KBC Split pod dijagnozom malignog melanoma srednje očne ovojnice.

Bolesnici i metode:

Pet bolesnika u dobi od 55 do 83 godine (tri muškarca i dvije žene), hospitaliziranih na Klinici za očne bolesti KBC Split u rujnu 2019; troje bolesnika sa sumnjom na melanom žilnice i dvoje bolesnika sa sumnjom na melanom cilijarnog tijela. U jednog bolesnika, koji nije imao očnih simptoma, dijagnoza je postavljena na redovnom oftalmološkom pregledu, dok su se ostali javili na hitni pregled zbog pada vida, iskrivljene slike, boli u oku i crvenog oka. Bolesnici su pri prijemu bili dobrog općeg stanja, bez ranije poznatih malignih bolesti i očnih bolesti. Dijagnostička obrada uključivala je: cjeloviti klinički oftalmološki pregled, ultrazvuk oka (US), ultrazvučnu biomikroskopiju (UBM), fluorescencinsku angiografiju (FA), optičku koherentnu tomografiju (SD-OCT), OCT angiografiju (OCTA) u jednom slučaju, magnetsku rezonanciju (MRI) ili kompjuteriziranu tomografiju (MSCT) orbita i mozga, laboratorijske pretrage uključujući tumorske biljege, sumacijsku snimku torakalnih organa, ultrazvuk abdomena, scintigrafiju skeleta, kao i interdisciplinarnu konzilijarnu preglede prema potrebi.

Rezultati:

Dijagnostičkom obradom u dvoje bolesnika potvrđena je početna dijagnoza, te je provedeno liječenje enukleacijom s umetanjem orbitalnog implantata. U oba slučaja isključeno je postojanje udaljenih metastaza melanoma. U jednog je bolesnika, upućenog kao maligni melanom žilnice, dijagnosticiran metastatski tumor žilnice s primarnim sijelom u gušterači. U preostalih dvoje bolesnika isključena je maligna bolest, te je postavljena dijagnoza skleromalacije odnosno vaskularne bolesti žilnice. Ultrazvuk oka je u svim slučajevima bio početna i ključna metoda koja je usmjerila dijagnostičku obradu prema stvarnoj dijagnozi. Jedan je bolesnik s malignim melanomom preminuo nakon godine dana. Bolesnik s metastatskim tumorom preminuo je nakon 4 mjeseca

Zaključak:

Melanom srednje očne ovojnice je najčešći primarni intraokularni tumor u odraslih. Od iznimne važnosti je pravodobna dijagnostika i liječenje jer je kod uznapredovale bolesti osim vidne funkcije oka ugrožen i život bolesnika. Brojne benigne i maligne lezije mogu oponašati oftalmoskopske

ki izgled melanoma srednje očne ovojnice, pa se nazivaju pseudomelanomima. Izuzetno je važno dijagnostički razlučiti maligni melanom od simulirajućih lezija jer pogreške mogu biti pogubne. Zamjene benignih lezija i melanoma također mogu biti izuzetno štetne (nepotrebna radioterapija, enukleacija). U slučaju klinički sumnjivih lezija pregled je potrebno nadopuniti drugim dijagnostičkim metodama. Dijagnozu je često moguće postaviti i bez invazivnih postupaka, a ultrazvuk je pri tom zlatni standard koji se i u ovom pregledu slučajeva pokazao kao najvažnija slikovna metoda.

Title:

Accurate diagnosis in five cases referred as uveal melanoma

Authors:

Tadić I, Olujić I, Bućan K, Pleština-Borjan I

Institution:

University Hospital Split

Aim:

To analyze diagnostic procedure and possibilities in the process of making a diagnosis in five patients all referred within a month to University Hospital Split with a diagnosis of uveal melanoma

Patients and methods:

Five patients aged 55 to 83 years (three men and two women), hospitalized at Department of Ophthalmology, University Hospital Split in a September 2019; three patients with suspected choroidal melanoma and two patients with suspected ciliary body melanoma. In one asymptomatic patient the diagnosis was made on a routine ophthalmological examination, while the others came to Emergency Department due to vision loss, distorted image, eye pain and red eye. Patients were in good general condition on admission, without previously known malignancies and eye diseases. Diagnostic procedure included: complete ophthalmic exam, ultrasound of the eye (US), ultrasound biomicroscopy (UBM), fluorescein angiography (FA), optical coherence tomography (SD-OCT), magnetic resonance (MRI) or computed tomography (MSCT) of the orbits and brain, laboratory tests including tumor markers, chest radiography, abdominal ultrasound, skeletal scintigraphy and other specialists were consulted as needed. In one case also OCT angiography was made.

Results:

The initial diagnosis was confirmed in two patients and enucleation with orbital implant insertion was performed. In both cases the presence of distant metastases was excluded. In one patient, referred as choroidal melanoma, secondary metastatic tumor of the choroid was diagnosed, with a primary tumor location in the pancreas. In the remaining two patients malignant disease was ruled out and a diagnosis of scleromalacia and vascular disease of the choroid was made. Ultrasound of the eye was the initial and key method that directed the diagnostic process toward the actual diagnosis. One patient with malignant melanoma died after one year. A patient with a metastatic tumor died after 4 months.

Conclusion:

Uveal melanoma is the most common primary intraocular tumor in adults. Because of the insidious onset and poor prognosis in advanced stage of disease early diagnosis is extremely important. Numerous benign and malignant lesions can mimic the ophthalmoscopic appearance of uveal melanoma so they are called pseudomelanomas. It is extremely important to diagnostically

distinguish malignant melanoma from mimicking lesions because errors can be fatal. Also replacing a benign lesion with melanoma can be very harmful to the patient (unnecessary radiotherapy, enucleation). In case of clinically suspicious lesion the examination needs to be supplemented by other diagnostic methods. Diagnosis can often be made without invasive procedures and ultrasound is the gold standard which has proven to be the most important imaging method also in this review of cases.

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Tadić

36. Ana Boras

Naslov:

Disk optičkog živca: hipoplastičan ili plastičan?

Autori:

Ana Boras, dr.med; izv.prof. dr.sc Mirjana Bjeloš, dr.med.

Ustanova:

Klinika za očne bolesti, Klinička bolnica „Sveti Duh“, Zagreb, Medicinski fakultet Osijek, Fakultet za dentalnu medicinu i zdravstvo Osijek, Sveučilišta J.J. Strossmayera u Osijeku Referentni cent ar Ministarstva zdravstva za dječju oftalmologiju i strabizam

Cilj:

Odrediti jasnu kliničku definiciju hipoplazije optičkog diska.

Bolesnici i metode:

Napravljen je sistemski pregled literatre u sljedećim bazama podataka: PubMed, Cochrane Library te u stručnoj literaturi.

Rezultati:

Hipoplazija optičkog živca je kongenitalna anomalija prepoznata kao glavni uzrok poremećaja vi da u djece s nistagmusom kao najčešćim kliničkim znakom. Histološki je definirana smanjenim brojem aksona optičkog živca s normalnim mezodermom i potpornim glijalnim tkivom. Promjer diska hipoplastičnog optičkog živca odrasle osobe (medijan 17.2 godine) je 0,8 +/- 0,28 mm, u u poredbi s vrijednostima 1,67+/-

0,3 mm u zdravom oku. Oftalmološki izgleda kao mala, siva ili blijeda glava optičkog živca koja je okružena žućkastim, peripapilarnim haloom i pigmentnim prstenom. Točna definicija koliko je „ mala“ papila hipoplastičnog živca kod neonatalnog oka u razvoju nije definirano. Međutim jedn ostavnim i brzim promatranjem omjera promjera diska i udaljenost između središta optičkog di ska i središta makule tijekom oftalmoskopije isključuje se potreba za kompliciranim metodama kao što je OCT u općoj anesteziji. Omjer manji od 1:3 definira optički živac kao hipoplastičan.

Zaključak:

Precizna i jasna klinička definicija omjera između promjera diska i udaljenosti diska od makule b i trebala biti uključena u buduće udžbenike kako bi se postavila točna dijagnoza hipoplazije opti čkog diska i osiguralo pravovremeno liječenje.

Title:

Optic nerve disk: hypoplastic or plastic?

Authors:

Ana Boras, MD; prof. Mirjana Bjeloš, MD

Institution:

University Eye Clinic, University Hospital „Sveti Duh“, Zagreb, Faculty of Medicine Osijek, Faculty of dental medicine and health care Osijek, University Josip Juraj Strossmayer in Osijek Referenc

e center of the Ministry of Health of the Republic of Croatia for pediatric ophthalmology and strabismus

Aim:

To determine conclusive clinical definition of hypoplastic optic disk.

Patients and methods:

A systemic literature review of the following databases was performed: Pubmed, Cochrane Library and specialist literature.

Results:

Optic nerve hypoplasia is a congenital anomaly recognized as the major cause of severe visual impairment in children with nystagmus as the most common clinical sign. Histologically, it is characterized by a subnormal thickness of optic nerve axons with normal mesodermal elements and glial supporting tissue. Disk diameter in affected adult eye (mean age 17.2) is 0,8 +/- 0,28 mm, compared to 1,67 +/-

0,3 mm in the healthy eye. The ophthalmoscopic appearance is that of a small, gray and pale optic nerve head, which is often surrounded by a yellowish mottled peripapillary halo, flanked on either side by a ring of pigment (double ring sign). The definition of „small“ in case of early neonatal eye development is not determined. However, simple and easy observation of the ratio between disc diameter and distance between center of the optic disk and center of the macula during ophthalmoscopy excludes the need for more complicated assessments like OCT under general anesthesia. The ratio less than 1:3 defines the optic nerve as hypoplastic.

Conclusion:

Conclusive clinical definition of the ratio between disk diameter and disk-macula distance should be included in future textbooks in order to set the accurate diagnosis of optic disk hypoplasia and ensure timely treatment.

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Ana

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Boras

37. Rajčić Ivan

Naslov:

Epidemiološka studija odaziva na rani probir djece na slabovidnost za vrijeme COVID19 pandemije za prvih 6 mjeseci 2021. godine.

Autori:

Rajčić Ivan dr. med., Skelin Siniša dr. med.

Ustanova:

Klinika za očne bolesti KBC Split

Cilj:

Ustanoviti odaziv i efekt skrininga na poziv Nacionalnog programa za rano otkrivanje slabovidnosti za djecu koja gravitiraju KBC Split za vrijeme pandemije COVID19 virusa.

Bolesnici i metode:

Probiru su sudjelovala djeca s navršениh 4 godine kojima se ispitivala vidna oštrina sa standardi ziranim "Lea" optotipovima na udaljenosti od 40cm i 3m. Svu djecu je pregledao isti specijalist za dječju oftalmologiju i strabizam.

Rezultati:

Uzorak za istraživanje bili su podaci HZJZ preko online aplikacije Nacionalnog programa za rano otkrivanje slabovidnosti. Probira nije bilo tijekom dijela 2020. godine, ali od početka 2021. godine je redovan i u većem obujmu. Od 735 djece koje je pozvano na probir pristupilo je 317 (43%). Od odazvanih se skoro trećina (29%) uputila dalje na potpuni oftalmološki pregled, najčešće zbog lošije vidne oštrine na oba oka.

Zaključak:

Iako je pandemija COVID19 virusa u Republici Hrvatskoj tijekom 2021. godine bila povoljnije epidemiološke situacije zbog restriktivnih mjera i imunizacije, odaziv na program je poražavajuć. Slabovidnost je javnozdrastveni problem s prevalencijom u Republici Hrvatskoj do 8%. Kako se u KBC Split porodi i gravitira 4000-4500 djece godišnje, za očekivati je kako će do 350 djece bez pravovremenog probira i intervencije kasno otkriti poremećaj vida i time će terapijski efekt i konačan ishod biti slabiji.

Title:

Epidemiological study of the response for early screening of children with amblyopia during the COVID19 pandemic for the first 6 months of 2021.

Authors:

Ivan Rajčić MD, Siniša Skelin MD

Institution:

Department of Ophthalmology in Clinical Hospital Centre Split

Aim:

Establish the response and screening effect to the call of the National Program for Early Detection of Visual Impairment (Nacionalni program za rano otkrivanje slabovidnosti) for children gravitating Clinical Hospital Centre Split during the COVID19 pandemic.

Patients and methods:

The screening was attended by children of 4 years of age who were tested for visual acuity with standardized "Lea" optotypes at a distance of 40 cm and 3 m. All children were examined by the same specialist in pediatric ophthalmology and strabismus.

Results:

The research sample was the data through online application of the National Programme for Early Detection of Visual Impairment (Nacionalni program za rano otkrivanje slabovidnosti). There was no screening during part of 2020, but since the beginning of 2021 it has been regular and on a larger scale. Of the 735 children invited for screening, 317 (43%) attended. Almost a third (29%) of those who responded were appointed to a complete ophthalmological examination, most often due to poorer visual acuity in both eyes.

Conclusion:

Although the COVID19 pandemic in the Republic of Croatia in 2021 was a more favorable epidemiological situation due to restrictive measures and immunization, the response to the program was poor. Visual impairment is a public health problem with a prevalence in the Republic of Croatia up to 8%. As 4000-4500 children are born in Clinical Hospital Centre Split every year, it is to be expected that up to 350 children will be diagnosed with visual impairment much later and thus the therapeutic effect and final outcome will not be satisfying.

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Ivan

Ime i prezime / First and Last Name:-Last

Rajčić

38. Leon Marković

Naslov:

Prikaz slučaja: Prvi pacijent liječen lijekom voretigen neparvovek u Republici Hrvatskoj na Klinici za očne bolesti Kliničke bolnice „Sveti Duh“

Autori:

Leon Marković, Damir Bosnar, Mladen Bušić, Mirjana Bjeloš, Borna Šarić, Biljana Kuzmanović Elabjer

Ustanova:

Leon Marković, Damir Bosnar, Mladen Bušić, Mirjana Bjeloš, Borna Šarić, Biljana Kuzmanović Elabjer

Cilj:

Tijekom mjeseca rujna 2020. godine na Klinici za očne bolesti Kliničke bolnice „Sveti Duh“, liječen je prvi pacijent voretigen neparvovekom, revolucionarnom genskom terapijom nasljednih distrofija mrežnice uzrokovanih mutacijom gena RPE65. Tijekom sljedećih mjeseci praćeni su ishodi liječenja uz pomoć objektivnih pokazatelja te subjektivih iskaza pacijenta.

Bolesnici i metode:

Pacijentica u dobi od 30 godina s dijagnosticiranom pigmentom retinopatijom te genetskim testiranjem potvrđenom mutacijom gena RPE65. Provedeno je liječenje subretinalnom aplikacijom lijeka voretigen neparvovek.

Rezultati:

Na preoperativnoj obradi te u postoperativnom tijeku praćeni su kvalitativni i kvantitativni oftalmološki parametri koji uključuju: vidnu oštrinu na blizu i na daleko, vidno polje, kontrastnu osjetljivost, oči makule i vidnog živca, oči angiografiju, fundus fotografiju, fundus autofluorescencija i mikroperimetrija. Na kontroli nakon 6 mjeseci posebno se ističe poboljšanje vidne oštrine (preoperativno VOD sc 0,3 nk; nbl VOD sc 0,2 nk; VOS sc 0,25 nk; nbl VOS sc 0,2 nk; postoperativno VOD sc 0,7 nk; nbl VOD sc 0,4 nk; VOS sc 0,3 nk; nbl VOD sc 0,3 nk), kontrastne osjetljivosti (preoperativno OD 5-1-C-5 OS 4-1-1-2 ; postoperativno OD 5-6-2-3 OS 7-4-1-5) te proširenje vidnog polja kvantificiranog kinetičkom perimetrijom

Zaključak:

Liječenje distrofija uzrokovanih RPE65 bialelnim mutacijama voretigen neparvovekom je prvo liječenje u povijesti čovječanstva i moderne medicine koje oboljelima od distrofija mrežnice nudi pozitivne ishode. Voretigen neparvovek je prvi lijek s novim farmakološkim, nesumnjivo dokazan pozitivnim učinkom koji stabilizira i zaustavlja distrofiju mrežnice uzrokovanu bialelnom RPE65 mutacijom, odgađa njezinu progresiju i restaurira funkcije vida. Pacijentica liječena navedenim lijekom na redovitim kontrolnim pregledima pokazuje subjektivne znakove poboljšanja potkrijepljene objektivnim parametrima testiranim standardiziranim oftalmološkim uređajima i testovima.

Title:

Case report: The first patient treated with voretigene neparvovek in the Republic of Croatia at the University Eye Clinic of the University Hospital „Sveti Duh“

Authors:

Leon Marković, Damir Bosnar, Mladen Bušić, Mirjana Bjeloš, Borna Šarić, Biljana Kuzmanović Elabjer

Institution:

University Eye Clinic, University Hospital "Sveti Duh", Zagreb, Faculty of Medicine Osijek, Faculty of dental medicine and health care Osijek, University Josip Juraj Strossmayer in Osijek Reference center of the Ministry of Health of the Republic of Croatia for pediatric ophthalmology and strabismus

Aim:

During September 2020 at the University Eye Clinic of the University Hospital "Sveti Duh", the first patient was treated with a revolutionary gene therapy for hereditary retinal dystrophies caused by a mutation in the RPE65 gene, voretigene neparvovek. During the following months, the outcomes of treatment were monitored with the help of objective ophthalmic indicators and subjective statements of the patient.

Patients and methods:

A 30-year-old patient diagnosed with pigment retinopathy and by genetic testing confirmed with a mutation in the RPE65 gene. Treatment with subretinal administration of voretigen neparvovek was performed.

Results:

Qualitative and quantitative ophthalmologic parameters were monitored on preoperative and postoperative examination, including: visual acuity, visual field, contrast sensitivity, macular and optic nerve OCT, OCT angiography, fundus photography, fundus autofluorescence and micropertometry. After six months after surgery particular emphasis was placed on the improvement of visual acuity (preoperative VOD sc 0.3 nk; near VOD sc 0.2 nk; VOS sc 0.25 nk; near VOS sc 0.2 nk; postoperative VOD sc 0.7 nk; near VOD sc 0,4 nk; VOS sc 0,3 nk; near VOD sc 0,3 nk), contrast sensitivity (preoperative OD 5-1-C-5 OS 4-1-1-2; postoperative OD 5-6-2-3 OS 7-4-1-5) and widening of the visual field quantified by kinetic perimetry

Conclusion:

The treatment of retinal dystrophies caused by RPE65 biallelic mutations with voretigene neparvovek is the first treatment in the history of mankind and modern medicine that offers patients with retinal dystrophy positive outcomes. Voretigene neparvovek is the first drug with a new pharmacological, undoubtedly proven positive effect that stabilizes and stops retinal dystrophy caused by a biallelic RPE65 mutation, delays its progression and restores vision functions. The patient treated with this drug at regular check-ups shows subjective signs of improvement supported by objective parameters tested by standardized ophthalmic devices and tests.

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Leon

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Marković

39. Ana Maria Varošaneć

Naslov:

Elektrofiziologija glaukoma-put do rane i konačne dijagnoze

Autori:

Ana Maria Varošaneć, Mirjana Bjeloš, Mladen Bušić

Ustanova:

Klinika za očne bolesti, Klinička bolnica „Sveti Duh“, Zagreb, Medicinski fakultet Osijek, Fakultet za dentalnu medicinu i zdravstvo Osijek, Sveučilište J.J. Strossmayera u Osijeku, Referentni centar Ministarstva zdravstva Republike Hrvatske za dječju oftalmologiju i strabizam

Cilj:

Prikaz učinkovitosti PERG-

a u ranoj detekciji disfunkcije ganglijskih stanica mrežnice kod osoba sa suspektnim primarnim glaukomom otvorenog kuta.

Bolesnici i metode:

Pacijent u dobi od 51 godine s povišenim intraokularnim tlakom izmjerenim na kontrolnim oftalmološkim pregledima te postavljenom sumnjom na glaukom otvorenog kuta. Učinjena je standardizirana glaukomska obrada uz elektrofiziološko testiranje funkcije ganglijskih stanica mrežnice.

Rezultati:

Zbog subjektivnih smetnji vida, pri pregledu za određivanja refraktivne korekcije dijagnosticira se početno kortikonuklearno zamućenje leća te se izmjere granično povišene vrijednosti intraokularnog tlaka (GAT: 24/25 mmHg). Na kontrolnim mjerenjima tlaka i dalje se mjere granično povišene vrijednosti IOT-

a (GAT: 25/26 mmHg). Učinjenom standardiziranom glaukomskom obradom ne opisuje se promjena u strukturi vidnog živca i RNFL sloja. Gonioskopski se nalazi otvoreni kut POS-

a. Nalaz vidnog polja Octopus G standard ukazuje na granično suženje vidnog polja (oc. dex.: MS (dB): 22,0; MD (<2,0 dB): 3,8; sLV (<2.5 dB) 3,1; oc. sin.: MS (dB): 18,1; MD (<2,0 dB): 5,6; sLV (<2.5 dB): 4,0. Dodatno se u obradu uključi elektrofiziološko testiranje funkcije ganglijskih stanica PERG-

om te se identificira produljenje latencije P50 (65,4 ms) i N95 (102,7 ms) uz smanjenje amplituda P50 (1,5 μ V) i N95 (2,1 μ V).

Zaključak:

Ispitivanje funkcije ganglijskih stanica PERG-

om omogućuje detekciju disfunkcije ganglijskih stanica bez prisutnih morfoloških i strukturalnih promjena uobičajeno detektiranih u razvijenoj glaukomoj bolesti morfološkim metodama vizualizacije retine i vidnog živca. Ispitivanje PERG-

om omogućuje preperimetrijsku ranu dijagnozu i liječenje primarnog glaukoma otvorenog kuta, prije nastupa ireverzibilnih promjena karakterističnih za glaukomsku bolest.

Title:

PERG in glaucoma – the pathway to early and final diagnosis

Authors:

Ana Maria Varošaneć, Mirjana Bjeloš, Mladen Bušić

Institution:

University Eye Clinic, University Hospital "Sveti Duh", Zagreb, Faculty of Medicine Osijek, Faculty of dental medicine and health care Osijek, University Josip Juraj Strossmayer in Osijek Reference center of the Ministry of Health of the Republic of Croatia for pediatric ophthalmology and strabismus

Aim:

To demonstrate the efficacy of PERG in the early detection of retinal ganglion cell dysfunction in primary open-angle glaucoma suspects.

Patients and methods:

A 51-year-old patient with elevated intraocular pressure measured at ophthalmologic examinations and with suspected open-angle glaucoma. Standardized glaucoma testing was performed with electrophysiological testing of the retinal ganglion cells function.

Results:

Due to subjective visual disturbance, refractive error was corrected. Incipient corticonuclear clouding of the lens and marginally elevated values of intraocular pressure were observed (GAT: 24/25 mmHg). Follow-up IOT measurements measured elevated IOP (GAT: 25/26 mmHg). The standardized work-up for glaucoma demonstrated no change in the structure of the optic nerve and the RNFL layer. Gonioscopically an open angle of the POS was determined. Octopus G standard was inconclusive for glaucoma (oc. dex.: MS (dB): 22.0; MD (<2.0 dB): 3.8; sLV (<2.5 dB) 3.1; oc. syn.: MS (dB): 18.1; MD (<2.0 dB): 5.6; sLV (<2.5 dB): 4.0). PatternERG testing of ganglion cell function displayed prolongation of P50 (65.4 ms) and N95 (102.7 ms) implicit time with a decrease in the amplitude of P50 (1.5 μ V) and N95 (2.1 μ V).

Conclusion:

PERG allows the detection of ganglion cell dysfunction in case when morphological and structural changes commonly detected in advanced glaucoma disease are not observed. PERG testing is crucial for preperimetric early diagnosis establishment and thus treatment of primary open-angle glaucoma, prior to the onset of irreversible changes characteristic for the glaucoma disease.

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Ana Maria

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Varošaneć

40. Bruno Markioli

Naslov:

Analiza dijagnostičkih nalaza optičke koherentne tomografije i vidnog polja u pacijenata s glaukomom i očnom hipertenzijom.

Autori:

Bruno M, Jovanović A, Rogošić V

Ustanova:

Klinika za očne bolesti, KBC Split, predstojnik izv. prof. dr. sc. Kajo Bućan, dr. med

Cilj:

Usporediti nalaz optičke koherentne tomografije (OCT) i funkcionalne promjene vidnog polja u pacijenata s očnom hipertenzijom i glaukomom otvorenog kuta.

Bolesnici i metode:

Istraživanjem je obuhvaćeno 68 očiju u 38 bolesnika koji su podijeljeni u dvije skupine. Skupina 1 se sastoji od 26 ispitanika (45 očiju) s glaukomom otvorenog kuta, dok se skupina 2 sastoji od 12 ispitanika (23 oka) s očnom hipertenzijom. U svih ispitanika je proveden cjeloviti oftalmološki i pregled, OCT pregled (Cirrus HD-OCT 5000, Zeiss) za mjerenje debljine RNFL i pregled vidnog polja s Octopus 101 perimetrom (Haag-Streit Interzeag), G2 program. Podatci su prikupljeni na Klinici za očne bolesti, Kliničkog bolničkog centra Split, Medicinskog fakulteta u Splitu. U statističkoj obradi su korišteni: Pearsonov test korelacije, T test, MannWhitney U test.

Rezultati:

U istraživanju je sudjelovalo 38 ispitanika sa 68 očiju od kojih je 12 (32%) bilo muškaraca, a 26 (68%) žena. Medijan životne dobi muškaraca iznosio je 56,6 godina (min-maks: 11-65), a žena 65 godina (min-maks: 41-80). MS u ukupnom broju očiju ima slabu pozitivnu korelaciju s prosječnom debljinom RNFL, RNFL superiorno i RNFL inferiorno. MD u ukupnom broju očiju slabo pozitivno korelira s prosječnom debljinom RNFL, a negativno s RNFL superiorno i RNFL inferiorno. Kod očiju s očnom hipertenzijom pronađena je statistički značajna razlika između debljine RNFL i indeksa MD i LV. Kod očiju s glaukomom otvorenog kuta nađena je pozitivna korelacija između debljine RNFL i indeksa MS, a negativna korelacija između debljine RNFL i indeksa MD i LV. Pronađena je statistički značajna korelacija između debljine RNFL po segmentima i globalnih indeksa vidnog polja u gornjem i donjem segmentu ($P < 0,05$).

Zaključak:

Opsežne strukturne promjene debljine RNFL mjerene OCT-om upućuju na funkcionalna oštećenja koja se otkrivaju pregledom vidnog polja. Prosječna debljina RNFL nije pouzdan parametar za ranu dijagnozu i praćenje glaukoma i očne hipertenzije, dok su promjene po segmentima glave vidnog živca (fokalne promjene) pouzdanije. Indeks vidnog polja MD je najosjetljiviji pokazatelj za praćenje napredovanja glaukoma i očne hipertenzije.

Title:

Analysis of diagnostic findings of optical coherence tomography and visual field in patients with glaucoma and ocular hypertension.

Authors:

Bruno M, Jovanović A, Rogošić V

Institution:

Department of ophthalmology, University Hospital Centre Split

Aim:

The aim of this study is to compare the findings of optical coherence tomography and functional changes in the visual field in patients with ocular hypertension and open angle glaucoma.

Patients and methods:

68 eyes (38 patients) were enrolled in this study and they were divided into two groups. Group 1 consisted of 26 patients (45 eyes) with open angle glaucoma and group 2 consisted of 12 patients (23 eyes) with ocular hypertension. All of them underwent a complete ophthalmic examination, OCT examination (Cirrus HD-OCT 5000, Zeiss) to measure the thickness of the retinal nerve fiber layer (RNFL), and visual field examination with the Octopus 101 perimeter (Haag-Streit Interzeag), G2 program. This study was conducted in the Eye Clinic University Hospital Split, School of Medicine Split. Tests used in the statistical analysis were Pearson correlation test, T test, Mann-Whitney U test.

Results:

The study included 38 patients with 68 eyes of which 12 (32%) were men and 26 (68%) were women. The median age of men was 56,6 years (min-max) and women 65 years (min-max). When examining all eyes, the MS index had weak positive correlation with average RNFL thickness, as well as the superior and inferior RNFL. A weak positive correlation was observed between the MD index and average RNFL thickness, while a negative correlation was observed between the MD index and the superior/inferior RNFL. In eyes with ocular hypertension, significant difference was found between RNFL thickness with MD and LV indices. In eyes with open angle glaucoma, positive correlation was found between RNFL thickness and the MS index, and negative correlation was observed between RNFL thickness with MD and LV indices. Correlation between RNFL thickness by segment and global indices of visual field was found statistically significant in the superior and inferior segment ($P < 0,05$).

Conclusion:

Extensive structural changes in RNFL thickness measured by OCT indicate functional impairment which is revealed by visual field examination. The average RNFL thickness is not reliable in early diagnosis and monitoring of glaucoma and ocular hypertension, while changes in RNFL thickness by segment (focal changes) are more reliable. The most reliable parameter in monitoring is mean defect (MD) index of the visual field.

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Bruno

Ime i prezime / First and Last Name:-Last

Markioli

41. Jelena Juri Mandić

Naslov:

„White-eyed” blowout fraktura (WEBOF): prikaz slučaja i pregled literature

Autori:

Jelena Juri Mandić^{1,2}; Lorena Karla Rudež¹; Sanja Perić^{1,2}; Nenad Vukojević^{1,2}

Ustanova:

1 Medicinski fakultet Sveučilišta u Zagrebu, Zagreb, Croatia; 2 Klinika za očne bolesti, Klinički bolnički centar Zagreb, Zagreb, Croatia

Cilj:

Predstavljamo slučaj „white-eyed” blowout frakture (WEBOF) u sedmogodišnjeg dječaka. WEBOF je ozljeda koja se često zanemaruje ili odgađa zbog vrlo blagih i nespecifičnih kliničkih i radioloških nalaza.

Bolesnici i metode:

Prikaz slučaja dječaka s WEBOF-om i pregled literature.

Rezultati:

Iako je EKG-

om pronađena nespecifična promjena ritma, MSCT orbite pokazao je frakturu tipa blowout desno medijalno bez zahvaćanja tkiva te je odlučeno da pacijent nema indikaciju za operaciju. Pacijent je primljen na promatranje te je primio male doze parenteralnih steroida i profilaktičke doze antibiotika. Opće stanje pacijenta se oporavilo drugog dana, a nakon 3 dana imao je potpunu ekstraokularnu pokretljivost bez boli na kliničkom pregledu. Hess Lancaster test bio je normalan 7 dana nakon traume glave. Pacijentu smo preporučili da ne puše nos.

Zaključak:

WEBOF se najčešće javlja kod djece i treba ga uzeti u obzir kod svih pacijenata s nedavnom traumom glave koji imaju bijelo oko i bolne ili ograničene ekstraokularne pokrete. Zbog Aschner-Dagninijevog refleksa (okulokardijalni refleks) pacijenti s WEBOF-om mogu imati bradikardiju, glavobolju, mučninu i povraćanje oponašajući intrakranijalnu ozljedu koja može dovesti do pogrešne dijagnoze ili odgođene dijagnoze. Rana dijagnoza i liječenje ključni su za sprječavanje sustavnih i okularnih komplikacija.

Title:

„White-eyed” blowout fracture (WEBOF): a case report and review of the literature

Authors:

Jelena Juri Mandić^{1,2}; Lorena Karla Rudež¹; Sanja Perić^{1,2}; Nenad Vukojević^{1,2}

Institution:

1 University of Zagreb School of Medicine, Zagreb, Croatia 2 Clinic for Ophthalmology, University Hospital Center Zagreb, Zagreb, Croatia

Aim:

We present a case of „white-eyed“ blowout fracture (WEBOF) in 7 year old boy. A WEBOF is an injury that is usually overlooked or delayed due to very mild and nonspecific clinical and radiological findings.

Patients and methods:

Case report of a boy with WEBOF and review of the literature

Results:

Although ECG showed unspecific rhythm changes, MSCT of the orbit demonstrated right medial blowout fracture without tissue entrapment and we decided there was no indication for surgery. The patient was admitted for observation and received small doses of parenteral steroids and prophylactic doses of antibiotics. General condition of the patient recovered on the second day and the patient had full extraocular motility without pain on clinical examination after 3 days. Hess Lancaster test was normal 7 days after the head trauma. We recommended to the patient to avoid blowing his nose.

Conclusion:

A WEBOF is most commonly seen in children and it should be considered in all patients with recent head trauma presenting with a white eye and painful or limited extraocular movements. Due to the Aschner-

Dagnini reflex (oculocardiac reflex) patients with WEBOF can present with bradycardia, headache, nausea and vomiting imitating an intracranial injury which can lead to misdiagnosis or delayed diagnosis. Early diagnosis and management are crucial to prevent systemic and ocular complications.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA ORBITU / Orbit section

Titula / Title:

Doc.dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Jelena

Ime i prezime / First and Last Name:-Last

Juri Mandić

42. Žarković Tomislava

Naslov:

Masquerade sindrom(prikaz slučaja)

Autori:

Žarković T., Marković I.

Ustanova:

Klinika za očne bolesti KBC Split

Cilj:

Prikazati slučaj bolesnika s seroznom ablacijom, široku dijagnostičku obradu i primjenjene terapijske postupke

Bolesnici i metode:

Pacijent u dobi 60 godina, koji je prebolio neoplazmu prostate te se liječi od hiperlipidemije, prezentirao se s padom vida u temporalnom dijelu vidnoga polja lijevog oka unatrag 5 dana od javljanja na našu Kliniku. Prilikom oftalmološkog pregleda utvrđena je vidna oštrina lijevoga oka L+P+, a pregledom fundusa lijevog oka uočene su opsežne mutnine u CV i gore nazalno solidna ablacija veličine 5PP, te po cijeloj retini bjeličasta žarišta. Rutinske laboratorijske pretrage bile su unutar referentnih vrijednosti. Napravljen je ultrazvuk lijevoga oka na kojem je opisana solidna ablacija oko područja makule veličine 7.5x3.1mm uz nešto solidarnih odjeka niskog reflektivitet a(opaciteti?). Svi traženi nalazi serologije bili su negativni (Sifilis, Toxoplazma gondii, HIV, HBV, HCV, CMV, HSV). Urađen je MSCT mozga i orbita koji je u granicama normalnog. 11 dan hospitalizacije urađen je PPV lijevoga oka te se uzeo aspirat prednje sobice i uzorak vitreusa koji je poslan na analizu te su svi nalazi bili negativni (Mycobacterium spp., CMV, HSV, VZV), a kulture sterilne. Nalaz FAG lijevoga oka ukazuje na vidljivu hiperfluorescenciju žilnice uz blok fluorescence u projekciju bijelih subretinalih naslaga u ranijim fazama, a u kasnijim fazama vidljivo obilno žilničko propuštanje što bi govorilo u prilog korioretinitisa. Pacijent je tada otpušten te se uputi u KBC Zagreb na daljinu obradu. U KBC Zagreb napravljena je vitrektomija sa biopsijom i insuflacijom C3F8 u lijevo oko. U nalazu biopsije nisu bili zamijećeni vidljivi tkivni elementi. Ponovno se hospitalizira na našoj Klinici nakon kontrolnog pregleda na kojem se napravio UZV lijevoga oka koji je pokazao ablaciju u donjim kvadrantima uz fibrozni tračak koji se vezuje na odignuće na 6h. Tada se napravila vitrektomija sa retinotomijom, LF pečatima te instilacijom silikonskog ulja. Započeta je terapija sa Solumedrolom 125 mg kroz 4 dana te nakon toga smanjivanje terapije. Nakon toga kontrolirao se ambulantno. 2 tjedna nakon zadnje kontrole hospitaliziran je na Klinici za neurologiju zbog subakutnog moždanog udara. Zatražen je MR mozga gdje se vidi lezija cerebeluma veličine 3.5 x1.8 cm, sa lezijama koje se imbibiraju i u folijama cerebeluma obostrano po tipu mogućeg leptomeningealnog rasapa. Diferencijalno dijagnostički se može raditi o primarno globalnom procesu mozga visokog stupnja malignosti ili presadnici.

Rezultati:

Pacijentu se isključila infektivna etiologija navedenih promjena. Postavljena je moguća dijagnoza a limfoma koju nismo mogli dokazati svim napravljeni dijagnostičkim metodama. Nakon neuroloških simptoma (disfoničan govor, nestabilnost u nogama) napravljen je MR mozga te se postavila moguća dijagnoza primarno glijalnog procesa mozga visokog stupnja malignosti ili presadne.

Zaključak:

Opsežnim dijagnostičkim i terapijskim metodama došli smo do zaključka da se ovdje radi o Masquerade sindromu. Masquerade sindrom obuhvaća niz bolesti koje imitiraju kliničku sliku upale oka. To uključuje širok raspon patologija kao što su intraokularno strano tijelo, ablacija retine, karcinom dojke, karcinom bubrega i pluća, Hodgkin limfom, non-Hodgkin limfom, intraokularni limfom između ostalog.

Title:

Masquerade syndrome (case report)

Authors:

Žarković T., Marković I.

Institution:

Clinic for Ophthalmology, University Hospital Center Split

Aim:

To present the case of patients with serous ablation, extensive diagnostic processing and applied therapeutic procedures

Patients and methods:

A 60-year-old patient who was being treated for hyperlipidemia and had a prostate neoplasm presented with a drop in vision in the temporal part of the left visual field 5 days before reporting to our Clinic. Ophthalmological examination revealed visual acuity of the left eye L + P +, and examination of the fundus of the left eye revealed extensive floaters in the CV and nasal solid ablation of 5 DD, and whitish foci at the retina. Routine laboratory tests were within the reference values. An ultrasound of the left eye performed, which described solid ablation around the macula area size 7.5x3.1mm with some solidarity echoes of low reflectivity (opacities?). All required serology findings were negative (Syphilis, Toxoplasma gondii, HIV, HBV, HCV, CMV, VZV, HSV, EBV). An MSCT of the brain and orbit was done which is within normal limits. On day 11 of hospitalization, PPV on a left eye was performed and an anterior chamber aspirate and vitreous sample were taken and sent for analysis, and all findings were negative (Mycobacterium spp., CMV, HSV, VZV) and cultures were sterile. The FAG finding of the left eye indicates visible vascular hyperfluorescence with fluorescence block in the projection of white subretinal deposits in the earlier stages, and in the later stages visible abundant vascular leakage which would speak in favor of chorioretinitis. The patient was then discharged and sent to KBC Zagreb for remote treatment with outgoing visual acuity of the left eye was L+P+. Vitrectomy with biopsy and insufflation C3F8 in the left eye was performed at the University Hospital Center Zagreb. No visible tissue elements were observed in the biopsy findings. He was re-hospitalized at our Clinic after a follow-up examination on which an ultrasound of the left eye was performed which showed ablation in the lower quadrants along with a fibrous band that is associated with elevation at 6h. Then a vitrectomy was performed with retinotomy, LF seals and instillation of silicone oil. Initiation of therapy with Solumedrol 125 mg for 4 days and then reduction of therapy. He was then checked on an outpatient basis. 2 weeks after the last check-

up, he was hospitalized at the Neurology Clinic for subacute stroke. An MRI of the brain was requested where a 3.5x1.8cm cerebellar lesion was seen, with lesions involving cerebral foils bilaterally according to the type of possible leptomeningeal spread. Differentially, it can be a primary glial process of the brain with a high degree of malignancy or a metastasis.

Results:

We ruled out the infectious etiology of these changes. A possible diagnosis of lymphoma was made, which we could not prove with all the diagnostic methods. After neurological symptoms (dysphonic speech, instability in the legs), an MRI of the brain was performed and a possible diagnosis of a primary glial process of the brain with a high degree of malignancy or a metastasis was made.

Conclusion:

Through extensive diagnostic and therapeutic methods, we have come to the conclusion that this is Masquerade syndrome. Masquerade syndrome encompasses a number of diseases that mimic the clinical picture of eye inflammation. These include a wide range of pathologies such as intraocular foreign body, retinal ablation, breast cancer, kidney and lung cancer, Hodgkin's lymphoma, non-Hodgkin's lymphoma, intraocular lymphoma among others.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU MLADI U OFTALMOLOGIJI / Young Ophthalmologist Section

Titula / Title:

Dr.

Specijalizant / Resident

Ime i prezime / First and Last Name:-First

Tomislava

Ime i prezime / First and Last Name:-Last

Žarković

43. Markušić Vedran

Naslov:

Autologna krv u kirurgiji ruptуре makule, serija slučajeva

Autori:

Markušić V., Kostić L., Šimić T., Oštrić Brnjac A.

Ustanova:

KBC Rijeka

Cilj:

Utvrđiti učinkovitost autologne krvi u kirurškom liječenju ruptуре makule

Bolesnici i metode:

Bolesnici reoperirani zbog nezatvarajuće ruptуре makule tretirani autolognom krvi.

Rezultati:

Kod svih bolesnika postignuto je zatvaranje ruptуре makule.

Zaključak:

Liječenje autolognom krvi jednostavno je, učinkovito i jeftina metoda kod nezatvarajuće ruptуре makule.

Title:

Autologous Blood in Macular Hole Surgery, case series

Authors:

Markušić V., Kostić L., Šimić T., Oštrić Brnjac A.

Institution:

KBC Rijeka

Aim:

To evaluate the efficiency of autologous blood in the treatment of macular hole.

Patients and methods:

Patients reoperated for non closing macular hole.

Results:

Macular holes were successfully closed in all treated patients.

Conclusion:

Autologous blood is a simple, effective and inexpensive method for the treatment for non closing macular holes.

Kongres / Congress:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA MREŽNICU / Retina section

Titula / Title:

Dr.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Vedran

Ime i prezime / First and Last Name:-Last

Markušić

44. Mira Knežić

Naslov:

Akutni prolazni miopski pomak kao prvi znak hemoragijske groznice s bubrežnim sindromom – prikaz slučaja

Autori:

Mira Knežić, Mirjana Bjeloš, Mladen Bušić, Damir Bosnar, Valentina Cigić, Senad Ramić

Ustanova:

Klinika za očne bolesti, Klinička bolnica „Sveti Duh“, Zagreb, Medicinski fakultet Osijek, Fakultet za dentalnu medicinu i zdravstvo Osijek, Sveučilišta J. J. Strossmayera u Osijeku, Referentni centar Ministarstva zdravstva za dječju oftalmologiju i strabizam

Cilj:

Naglasiti važnost očnih manifestacija kao prvog znaka hemoragijske groznice s bubrežnim sindromom (HGBS).

Bolesnici i metode:

Muškarac u dobi od 38 godina javio se u hitnu oftalmološku službu zbog zamagljenog vida na oba oka na daljinu posljednjih par sati uz fotofobiju i glavobolju. Ranije uredan vid na oba oka, ne nosi refraktivnu korekciju. Negira druge očne i sustavne tegobe, nije bio febrilan. Inače zdrav, ne uzima lijekove. Prije dva tjedna radio je kao konobar u šumskom području Medvednice, navodno prisutnost glodavaca na radnom mjestu. Iz statusa: VOU: cc - 3,50 Dsph = 1,0, NBL (33 cm) sc = 0,8/1,0, ostali nalaz uredan. Postavljena je sumnja na akutni miopski pomak u sklopu HGBS.

Rezultati:

Učinjenom laboratorijskom obradom verificirana je trombocitopenija, povišenje CRP-a i AST-a te aktivan sediment urina. Serološki je dokazan pozitivan anti-

Puumala IgM te granično pozitivan anti-

Dobrava IgM. Tijekom hospitalizacije pacijent je razvio blažu kliničku sliku – umjeren porast kreatinina bez hemoragijskih manifestacija s potpunim oporavkom bubrežne i vidnih funkcija.

Zaključak:

Akutni prolazni miopski pomak jedna je od brojnih očnih manifestacija HGBS, a u ovom slučaju i prvi znak bolesti koji je suzio diferencijalnu dijagnozu i pravilno usmjerio dijagnostičke postupke u cilju ranog prepoznavanja HGBS. Najvjerojatniji pretpostavljeni patogenetski mehanizam je edem i krvarenje u cilijarno tijelo uslijed povećane kapilarne permeabilnosti i trombocitopenije te posljedični anteriorni pomak iridolentalne dijafragme.

Title:

Acute transient myopic shift as the first sign of hemorrhagic fever with renal syndrome - a case report

Authors:

Mira Knežić, Mirjana Bjeloš, Mladen Bušić, Damir Bosnar, Valentina Cigić, Senad Ramić

Institution:

University Eye Clinic, University Hospital "Sveti Duh", Zagreb, Faculty of Medicine Osijek, Faculty of dental medicine and health care Osijek, University Josip Juraj Strossmayer in Osijek, Reference center of the Ministry of Health of the Republic of Croatia for pediatric ophthalmology and strabismus

Aim:

To emphasize the importance of ocular manifestations as the first signs of hemorrhagic fever with renal syndrome (HFRS).

Patients and methods:

A 38-year-old man presented to the emergency eye unit due to blurred vision in both eyes at distance for the past few hours accompanied with photophobia and headache. He denied other eye and systemic signs or symptoms, he was not febrile. Otherwise healthy, he had normal vision and did not require refractive correction. He used no medication. Two weeks ago he worked as a waiter in the forest area of Medvednica, where rodents were present. Ophthalmologic findings: Best-corrected distance visual acuity was 20/20 for both eyes with -3.50 D. Uncorrected near visual acuity was 20/25 for right eye and 20/20 for left eye. Other physical exam findings were unremarkable. Acute myopic shift in HFRS was suspected.

Results:

Laboratory tests revealed thrombocytopenia, elevated CRP and AST, and active urinary sediment. He was positive for Puumala virus IgM antibodies with borderline level of Dobrava virus IgM antibodies. The patient was admitted to hospital and during hospitalization he had mild form of HFRS - a moderate increase in serum creatinine without hemorrhagic manifestations, and complete recovery of renal and visual function.

Conclusion:

Acute transient myopic shift is one of the numerous ocular manifestations of HFRS, and in this case the first sign of the disease that narrowed the differential diagnosis and correctly directed diagnostic procedures for early detection of HFRS. The most likely putative pathogenetic mechanism is edema and bleeding into the ciliary body due to increased capillary permeability and thrombocytopenia and consequent anterior displacement of the iridolental diaphragm.

Kongres / Congress:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU MLADI U OFTALMOLOGIJI / Young Ophthalmologist Section

Titula / Title:

Dr.

Specijalizant / Resident

Ime i prezime / First and Last Name:-First

Mira

Ime i prezime / First and Last Name:-Last

Knežić

45. Mia Zorić Geber

Naslov:

PreserFlo MicroShunt: "MIGS" ili "MIBS"?

Autori:

Mia Zorić Geber

Ustanova:

Klinika za očne bolesti, KBC Sestre milosrdnice

Cilj:

Prikazati formiranje filtracijskog jastučića kirurškom tehnikom implantacije PreserFlo® Microšanta. Kirurška tehnika subkonjunktivalne implantacije glaukomskeg implantata vanjskim pristupom je mikroinvazivna kirurška tehnika s formiranjem filtracijskog jastučića koja postiže snažno sniženje intraokularnog tlaka za razliku od implantacije implantata unutrašnjim pristupom bez kreiranja filtracijskog jastučića koja postiže umjereno sniženje intraokularnog tlaka

Bolesnici i metode:

A fornix-based subconjunctival and sub-Tenon's flap is dissected at the nasal or temporal quadrant over a circumference of 90 to 120 degrees, to at least 8 to 10mm posterior to the limbus. Following placement of 0.4 mg/mL MMC soaked sponges in the flap for 2 min of exposure, a 3mm marker is used to mark a point 3mm from the middle border of the surgical limbus in the blue-gray zone. At the distally marked point on the sclera, a 1mm width knife is used to incise a shallow triangular pocket in the sclera (large enough to seat the fins of the Micro-Shunt). A needle is then used to create a transscleral tunnel from the apex of the scleral pocket into the anterior chamber. Using forceps, the MicroShunt is threaded, bevel up and fins flat, into the transscleral tunnel. The fins are then wedged into the scleral pocket. The flow through the MicroShunt is checked prior to closure of Tenon's capsule and the conjunctiva. Flow is confirmed visually by first observing a percolation of air and aqueous humor from the distal end of the device. Following confirmation of flow, the distal end of the MicroShunt is tucked underneath Tenon's capsule and the conjunctiva, ensuring that it is straight and free of tissue; sutures are then used to reposition Tenon's capsule and the conjunctiva over the device and to the limbus. Postoperative review showed diffuse bleb extending posteriorly and very low-teen IOP measurements without any related complications.

Rezultati:

Postoperative review showed diffuse bleb extending posteriorly and very low-teen IOP measurements without any related complications.

Zaključak:

The surgical bleb-forming MIGS procedure of the Preserflo® MicroShunt implantation removes the need for scleral flap formation, sclerostomy, and iridectomy, all of which are critical steps in trabeculectomy.

Title:

PreserFlo MicroShunt: "MIGS" or "MIBS"?

Authors:

Mia Zorić Geber

Institution:

Department of Ophthalmology, Sestre milosrdnice University Hospital Center

Aim:

To present the bleb-forming PreserFlo® MicroShunt implantation technique. The surgical procedure for the PreserFlo® MicroShunt is bleb-forming MIGS and the device is implanted subconjunctivally via an ab externo approach. Ab interno non-bleb forming MIGS procedures are associated with only a moderate reductions in IOP and are targeted at patients with mild-to-moderate glaucoma.

Patients and methods:

A fornix-based subconjunctival and sub-Tenon's flap is dissected at the nasal or temporal quadrant over a circumference of 90 to 120 degrees, to at least 8 to 10mm posterior to the limbus. Following placement of 0.4 mg/mL MMC soaked sponges in the flap for 2 min of exposure, a 3mm marker is used to mark a point 3mm from the middle border of the surgical limbus in the blue-gray zone. At the distally marked point on the sclera, a 1mm width knife is used to incise a shallow triangular pocket in the sclera (large enough to seat the fins of the Micro-Shunt). A needle is then used to create a transscleral tunnel from the apex of the scleral pocket into the anterior chamber. Using forceps, the MicroShunt is threaded, bevel up and fins flat, into the transscleral tunnel. The fins are then wedged into the scleral pocket. The flow through the MicroShunt is checked prior to closure of Tenon's capsule and the conjunctiva. Flow is confirmed visually by first observing a percolation of air and aqueous humor from the distal end of the device. Following confirmation of flow, the distal end of the MicroShunt is tucked underneath Tenon's capsule and the conjunctiva, ensuring that it is straight and free of tissue; sutures are then used to reposition Tenon's capsule and the conjunctiva over the device and to the limbus.

Results:

Postoperative review showed diffuse bleb extending posteriorly and very low-teen IOP measurements without any related complications.

Conclusion:

The surgical bleb-forming MIGS procedure of the PreserFlo® MicroShunt implantation removes the need for scleral flap formation, sclerostomy, and iridectomy, all of which are critical steps in trabeculectomy.

Kongres / Congresses:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA GLAUKOM / Glaucoma section

Titula / Title:

Prof.dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Mia

Ime i prezime / First and Last Name:-Last

Zorić Geber

46. Ana Vučinović

Naslov:

Mjerenje bolnog podražaja izazvanog rastvaranjem vjeđa prilikom intravitrealnih injekcija korištenjem Skin Conductance Monitor i procjena ekonomske učinkovitosti.

Autori:

Ana Vučinović, Beáta Éva Petrovski, Ante Bašić, Boško Jakšić, Hanne Storm, Ljubo Znaor, Goran Petrovski

Ustanova:

Klinički bolnički centar Split

Cilj:

Cilj ovog istraživanja je objektivno mjerenje boli uzrokovane različitim načinima rastvaranja vjeđa a prilikom primjene intravitrealnih injekcija korištenjem Skin Conductance Monitora(SCM MedStorm Innovation)

Bolesnici i metode:

U ovom randomiziranom prospektivnom istraživanju provedenom u KBC Split od srpnja 2019.g. do listopada 2020.g. sudjelovalo je 185 odraslih (>18g.) pacijenata. Pacijenti su randomizirani u dvije skupine- manualno rastvaranje vjeđa i rastvaranje vjeđa blefarostatom, korištenjem kompjuterskog generatora. U ovom istraživanju je korišten Skin Conductance Monitor tvrtke MedStorm Innovation kojim se mjerio odgovor na bolni podražaj korištenjem triju elektroda zalijepljenih na palmarnu stranu dlana. Ovaj uređaj mjeri promjene u kožnoj provodljivosti žlijezda znojnica koje upravo na palmarnoj strani dlana u najvećoj mjeri odgovaraju na bolni podražaj. Prije zahvata pacijenti su ispunili State Trait Anxiety Inventory i Pain Catastrophising Scale upitnike kojima se procjenila razina anksioznosti i opća percepcija bolnih podražaja. Nakon zahvata pacijenti su ispunili Numerical Pain Rating Scale kojim su subjektivno ocjenili razinu boli tijekom zahvata. Svi pacijenti su prije sudjelovanja potpisali Obrazac informiranog pristanka i istraživanje je odobreno od Etičkog povjerenstva KBC Split.

Rezultati:

Nije bilo statistički značajne razlike između ispitivanih skupina u mjerenjima uređaja SCM. Također, nije pronađena statistički značajna razlika između ispitivanih skupina u rezultatima STAI, PCS i NRS upitnika.

Zaključak:

Ovi rezultati potakli su nas da napravimo cost benefit analizu kojom je utvrđeno da bi se korištenjem manualne tehnike rastvaranja vjeđa značajno uštedilo na kupnji (cijena blefarostata 5\$), održavanju i sterilizaciji blefarostata (između 0.51 \$ i 0.77\$) što bi omogućilo povećanje broja antitumorskih i VEGF injekcija te dostupnost terapije većem broju pacijenata. Za kliniku koja na godišnjoj razini daje 20000 injekcija ušteda korištenjem manualne tehnike bi proizvela između 412 i 527 više injekcija godišnje.

Title:

Eyelid retraction during intravitreal injections – assessment of pain using skin conductance monitoring and cost-benefit analysis

Authors:

Ana Vučinović, Beáta Éva Petrovski, Ante Bašić, Boško Jakšić, Hanne Storm, Ljubo Znaor, Goran Petrovski

Institution:

Split University Hospital

Aim:

The aim of this study was to objectively measure pain caused by diverse methods of eyelid retraction in patients undergoing anti-VEGF intravitreal injections using Skin Conductance Monitor from Med-Storm Innovation.

Patients and methods:

We conducted a randomized prospective study at the Department of Ophthalmology, University Hospital Split, Croatia from July, 2019 to October, 2020. There were 185 adult patients (age ≥ 18 years) who received IVI. The patients were randomised into experimental (manual eyelid retraction) or control (eyelid speculum) group at the beginning of each session of intravitreal therapy by a computer generator. SCM from Med-Storm Innovation was used to evaluate pain by measuring real-time variations in the conductance of the skin. Measurements are made through three non-invasive self-adhesive electrodes, called C (current), R (reference) and M (measurement) fixed on the palmar side of the hand or the plantar side of the foot where the sweat glands are numerous and much more responsive to psychological stimuli than to thermal stimuli. The patients filled out two questionnaires before undergoing IVI (STAI-State Trait Anxiety Inventory and PCS-Pain Catastrophising Scale) to evaluate their anxiety levels and pain perception. The patients filled out a NPRS (Numerical Pain Rating Scale) after the IVI. All patients signed a written consent form for participation in the study. The study was approved by the Ethics Committee of the University Hospital Split.

Results:

The two methods of eyelid retractions (manual vs. speculum, respectively) showed no significant difference in the parameters given by the SCM. Similarly, no significant difference was found between the manual and the speculum eyelid retraction according to the PCS, STAI and NRS subjective scores. The difference between the two methods of eyelid retraction was not found to be significant.

Conclusion:

Given the pain equivalence between the two techniques we conducted a cost benefit analysis which concluded that using the manual eyelid retraction technique would cut the cost of instrument purchase (5\$) and instrument sterilisation ((\$0.51 to \$0.77)) which could lead to an increase in the number of anti-VEGF injections available to patients between 412 and 527 for a clinic that administers 20000 injections yearly.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA MREŽNICU / Retina section

Titula / Title:

Dr.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Ana

Ime i prezime / First and Last Name:-Last

Vučinović

47. Marija Škara Kolega

Naslov:

Ankyloblepharon filiforme adnatum- prikaz slučaja i pregled literature

Autori:

Marija Škara Kolega 1, Pupić-Bakrač A 1, Konjevoda S 1, Neven Milić 2

Ustanova:

Opća bolnica Zadar, Odjel za oftalmologiju i optometriju1, Odjel za pedijatriju 2

Cilj:

Cilj ovog rada je prikazati slučaj rijetke kongenitalne anomalije vjeđe Ankyloblepharon filiforme adnatum (AFA), liječenje i povezanost sa drugim kongenitalnim anomalijama. Dodatno smo na pravili pregled literature u PubMed bazi dosada objavljenih slučajeva AFA-e.

Bolesnici i metode:

Prikaz slučaja: Po porodu ženskog novorođenčeta primijećena je nemogućnost spontanog otvaranja vjeđa desnog oka. Pregledom se utvrdio fibrozni tračak koji spaja gornju i donju vjeđu uz nemogućnost otvaranja vjeđe i pregled ostalih dijelova oka. Nakon kirurške ekscizije fibroznog tračka 10. dana života omogućena je normalna funkcija i razvoj vida djeteta. Kompletним pregledom ostalih organskih sustava utvrđen je defekt septuma atrija po tipu otvorenog foramena ovalis. Dijete se prati 2 godine. Pregled literature: Pregledali smo literaturu sličnih slučajeva izolirano g AFA ili udruženog sa drugim razvojnim anomalijama publiciranih na PubMed-u od 1950. godine do kolovoza 2021. godine, te usporedili sa prikazanim slučajem.

Rezultati:

Kod prikazanog slučaja, uspješnom ekscizijom fibroznog tračka omogućen je normalni razvoj vida novorođenčeta te spriječen nastanak potencijalne ambliopije.

Pregledom literature u PubMed bazi pronašli smo 80 opisanih slučajeva AFP. Opisani su unilateralni ili bilateralni izolirani sporadični slučajevi, kao i udruženi sa drugim anomalijama. Najčešće udružene kongenitalne anomalije su rascjep usne i nepca, AEC sindrom (ankyloblepharon-ectodermal dysplasia-clefting sy), CHANDS sindrom (curly hair-ankyloblepharon-nail dysplasia sy), Hay-Wells sindrom, Edwards sindrom i drugi.

Zaključak:

Važnost AFA anomalije je pravodobnim liječenjem spriječiti nastanak ambliopije i ukazati na mogućnost postojanja kongenitalnih anomalija ostalih organskih sustava.

Prikazani slučaj je prvi opisani u Hrvatskoj, a po literaturi drugi slučaj AFA sa atrialnim septalnim defektom.

Title:

Ankyloblepharon filiforme adnatum- case report and literature review

Authors:

Marija Škara Kolega 1, Pupić-Bakrač A 1, Konjevoda S 1, Neven Milić 2

Institution:

Aim:

The aim of this paper is to present a case of a rare congenital eyelid anomaly Ankyloblepharon filiforme adnatum (AFA), treatment and association with other congenital anomalies. We additionally reviewed the literature in the PubMed database of AFA cases published so far.

Patients and methods:

Case report: After the birth of a female newborn, the lack of spontaneous eye-opening of the right eye was noticed. Examination revealed a fibrous strand that connects the upper and lower eyelids with the inability to open the eyelids and examine other parts of the eye. After surgical excision of the fibrous strand on the 10th day of life, normal function and development of the vision was enabled. A complete examination of other organ systems revealed an atrial septal defect, type of open foramen ovale. The child is monitored for 2 years. Literature review: We reviewed the literature of similar cases of isolated AFA or associated with other congenital anomalies published on PubMed from 1950 to August 2021, and compared it with the presented case.

Results:

In the presented case, successful excision of the fibrous strand enabled the normal development of the vision and prevented the occurrence of potential amblyopia.

A review of the literature in the PubMed database identified 80 cases of AFP. Unilateral or bilateral isolated sporadic cases have been described, as well as associated with other congenital abnormalities. The most common associated congenital anomalies are cleft lip and palate, AEC syndrome (ankyloblepharon-ectodermal dysplasia-clefting sy), CHANDS syndrome (curly hair-ankyloblepharon-nail dysplasia sy), Hay-Wells syndrome, Edwards syndrome and others.

Conclusion:

The importance of AFA anomalies is to prevent the development of amblyopia and to indicate the possibility of congenital anomalies of other organ systems.

The presented case is the first described in Croatia, and according to the literature the second case of AFA with atrial septal defect.

Kongres / Congresses:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA PEDIJATRIJSKU OFTALMOLOGIJU I STRABIZAM / Pediatric Ophthalmology and Strabismus section

Titula / Title:

Dr.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Marija

Ime i prezime / First and Last Name:-Last

Škara Kolega

48. Bašić Ante

Naslov:

Uspješnost liječenja vitrealnih opaciteta pomoću Nd:YAG laser vitreolize ispitano upitnikom kvalitete života

Autori:

Bašić A, Osmančević A, Znaor LJ.

Ustanova:

Klinika za očne bolesti KBC Split

Cilj:

Cilj ovog istraživanja je utvrditi učinkovitost Nd:YAG laser vitreolize u simptomatskom smanjivanju vitrealnih opaciteta ispitano upitnikom.

Bolesnici i metode:

U istraživanju je uključeno simptomatskih sedamnaest bolesnika, kojima je ambulantno na kliničkom pregledu potvrđena dijagnoza vitrealnih opaciteta ili odvajanje stražnje staklovine (PVD). Bolesnici su bili podvrgnuti zahvatu Nd: YAG laser vitreolize snagom 4-8 mJ te brojem laserskih pečata od 160-600. Snaga i broj pečata ovisila je o procjeni liječnika. Bolesnici su bili praćeni kroz mjesec dana.

Rezultati:

Pedeset tri posto pacijenata navodili su blage, a četrdeset dva posto pacijenata navodili su jake smetnje u svakodnevnom životu uzrokovanom vitrealnim opacitetima. Osamdeset osam posto bolesnika navode subjektivno smanjenje smetnji nakon mjesec dana, pet posto bolesnika je navelo da im se nisu promijenili simptomi. Veći broj laserskih pečata i jača energija nisu korelirali s boljim rezultatom. Nakon zahvata nije bilo zabilježeno niti jedno povišenje intraokularnog tlaka, pada vidne oštrine ni OCTom potvrđenog edema makule. Kod dva bolesnika došlo je do neželjenog pogodka mrežnice u blizini vidnog živca uz minimalno mrežnično krvarenje koje se resorbiralo do sljedeće kontrole, a kod jednog bolesnika je bila pogođena leća. Niti jedan bolesnik nije imao time uzrokovanih funkcijskih posljedica.

Zaključak:

Nd: YAG laser vitreoliza je sigurna i valjana alternativa za liječenje vitrealnih opaciteta da pri tome ne ugrožava uspješnost eventualnih naknadnih zahvata.

Title:

Benefits of treating vitreous floaters with nd: yag laser vitreolysis: determined by vision related quality of life questionnaire

Authors:

Bašić A, Osmančević A, Znaor LJ.

Institution:

Department of Ophthalmology, University Hospital Centre Split

Aim:

The aim of this study was to determine the efficacy Nd:YAG laser vitreolysis in the reduction of symptoms via questionnaire.

Patients and methods:

The study included seventeen patients who came to the Eye Clinic, KBC Split, with clinically confirmed diagnosis of vitreal opacity or posterior hyaloid detachment (PVD). Patients were treated with Nd:YAG laser vitreolysis with power in the range of 4-8 mJ and number of laser shoots in the range of 160-600. The power and number of laser shoots was determined by the examiner. Patients were followed-up for at least 1 month.

Results:

Fifty-three percent of patients reported mild symptoms, and forty-seven percent of patients reported severe symptoms in everyday life caused by vitreous floaters. Eighty-eight percent of patients had a subjective reduction in symptoms, five percent of patients have reported complete absence of symptoms and five percent of patients had no reduction in symptoms. A larger number of laser spots and higher energy level did not amount to a better result in symptom reduction. There was no increase in intraocular pressure, drop in best corrected visual acuity or OCT confirmed oedema of the macula post procedure. In two patients there was an accidental retinal hit near the optic nerve with minimal retinal bleeding which had reabsorbed till the next check-up. In one patient the lens was hit with a single laser spot. None of the patients had functional changes.

Conclusion:

Nd:YAG laser vitreolysis is a safe and effective alternative for the treatment of vitreal floaters and does not appear to jeopardize the success of possible other procedures.

Kongres / Congresses:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU MLADI U OFTALMOLOGIJI / Young Ophthalmologist Section

Titula / Title:

Dr.

Specijalizant / Resident

Ime i prezime / First and Last Name:-First

Ante

Ime i prezime / First and Last Name:-Last

Bašić

49. Bućan Ivona

Naslov:

Glikozilirani proteini kao biomarkeri senilne makularne degeneracije

Autori:

Bućan Ivona (1), Polašek Ozren (2), Pleština Borjan Ivna (1), Borjan Ivan (1), Marković Irena (1), Bućan Kajo (1)

Ustanova:

(1) Klinika za očne bolesti, KBC Split; (2) Medicinski fakultet Sveučilišta u Splitu

Cilj:

Primarni cilj istraživanja je otkrivanje glikozilacijskih komponenti na proteinima u plazmi kao potencijalnih biomarkera pojavnosti senilne makularne degeneracije.

Bolesnici i metode:

Uzorak za istraživanje je populacijski i čine ga ispitanici iz kohorte 10.001 Dalmatinac. Istraživanje je uključilo 158 ispitanika starijih od 55 godina sa senilnom makularnom degeneracijom i 4468 kontrolnih ispitanika koji nemaju senilnu makularnu degeneraciju niti bilo koju drugu mrežničnu bolest. Svim ispitanicima je napravljen opći oftalmološki pregled, snimljena očna pozadina (fundus fotografija) i uzet uzorak krvi za analizu glikoziliranih proteina. Fundus fotografije s jasno vidljivim makularnim područjem analizirane su prema Međunarodnoj klasifikaciji senilne makularne degeneracije iz 1995. Prema toj klasifikaciji, stupnjevanje senilne makularne degeneracije temelji se na fundus fotografijama u boji te se razlikuje: a) rani stadij bolesti s nazočnim druzama i/ili abnormalnostima retinalnog pigmentnog epitela i b) kasni stadij neovaskularne vlažne forme ili suhe forme u obliku geografske atrofije. Obje skupine su ujednačene prema dobi, spolu i pridruženim drugim komorbiditetima. Iz uzoraka krvi, nakon adekvatne pohrane i pripreme, izolirana je plazma koja je podvrgnuta standardnoj proceduri izolacije imunoglobulina G (IgG) na natrijevom dodecil sulfat-

poliakrilamidnom gelu te oslobođanje glikana s IgG korištenjem mikrotitarske G-monolitne ploče i glikozidaza. Detekcija glikana oslobođenih s IgG i glikana na ostalim plazmatičkim proteinima proveda se tekućinskom kromatografijom visoke djelotvornosti i masenom spektrometrijom. Podaci su analizirani uz pretpostavku snage istraživanja (P) od 80% i razine značajnosti (α) od 0,05. Korišten je multivarijatni model u kojem su dob (>55 godine) i spol kao kontrolirajuće inačice ustaljene da bi se smanjio utjecaj istih na izlaznu varijablu - senilnu makularnu degeneraciju, dok se testom logističke regresije ispitaio utjecaj više varijabli istovremeno na pojavnost same bolesti (pridruženi komorbiditeti kao rizični čimbenici nastanka senilne makularne degeneracije).

Rezultati:

Od 158 ispitanika sa senilnom makularnom degeneracijom bilo je 133 (84,18%) ispitanika s ranim stadijem bolesti i njih 25 (15,82%) s kasnim stadijem. Od toga bilo je 66 (41,78%) muškaraca i 92 (58,22%) žene. Medijan životne dobi muškaraca iznosio je 79,8 godina (min.-maks.:55-

89), a žena 80,7 godina (min.-maks.:55-90). Analizirano je ukupno 70 glikana plazme. Glikani povišene razine koncentracije u plazmi kod ispitanika sa senilnom makularnom degeneracijom su: B1_DG12 (ispitivana skupina: 0,84±0,37 (0,36-2,29); kontrolna skupina: 0,75±0,31 (0,1-2,46) P 0,029), B1_DG13* (0,79±0,46 (0,28-2,3); 0,68±0,28 (0,18-2,45) P 0,005), B1_A-FUC (3,31±1 (1,79-6,51); 3,09±0,9 (1,43-11,05) P 0,057), B1_IgG_GP1* (0,22±0,2 (0,05-1,06); 0,17±0,17 (0,02-1,91) P 0,009), B1_IgG_GP11* (0,77±0,16 (0,42-1,11); 0,73±0,18 (0,15-2,58) P 0,068), B1_IgG_GP13* (0,27±0,14 (0,12-0,98); 0,24±0,12 (0,08-1,71) P 0,098), B1_IgG_GP16* (3,22±0,45 (2,35-4,88); 3,08±0,52 (1,71-11,16) P 0,031), B1_IgG_GP20* (0,6±0,43 (0,14-2,26); 0,49±0,39 (0,07-3,46) P 0,021). Glikan snižene razine koncentracije u ispitivanoj skupini: B1_IgG_GP14* (11,15±3,55 (4,81-20,94); 12,09±3,85 (3,39-26,96) P 0,052). Glikani označeni sa zvjezdicom* imaju efekt doze koji korelira sa stadijem bolesti. Testom logističke regresije ustanovljen je efekt doze glikana DG13 ($\beta=0,08$ [95%CI 0,01-0,61]; P=0,014), a multivarijantni model predložio je DG13 i kao molekulu koja je prilagođena dobi i spolu.

Zaključak:

Glikozilacija je proces posttranslacijske modifikacije kojom se monosaharidi vežu na aminokiselinske proteina, što ih čini njihovom integralnom strukturalnom i funkcionalnom komponentom. Glikozilacijske promjene odražavaju se tijekom procesa starenja i u zdravih pojedinaca nakon 50 godina života, u raznim akutnim i kroničnim stanjima, i to u ranoj akutnoj fazi te prate progresiju bolesti. Ključan u patogenezi senilne makularne degeneracije je oksidacijski stres u sklopu kojeg proteini upalno-imunološko-neovaskularnog odgovora podliježu promjenama obrasca glikozilacije. Istraživanje je pokazalo da ispitanici sa senilnom makularnom degeneracijom imaju različiti profil plazme glikoziliranih proteina u odnosu na kontrolnu skupinu, koji korelira sa stadijem bolesti, te se time otvara mogućnost korištenja istih kao potencijalnih biomarkera bolesti.

Title:

Glycosylated proteins as biomarkers of age-related macular degeneration

Authors:

Bučan Ivona (1), Polašek Ozren (2), Pleština Borjan Ivna (1), Borjan Ivan (1), Marković Irena (1), Bučan Kajo (1)

Institution:

(1) Clinic of Ophthalmology, Clinical Hospital Centre Split; (2) School of Medicine, University of Split

Aim:

The primary aim of the study is to detect glycosylated components on plasma proteins as potential biomarkers of age-related macular degeneration (ARMD).

Patients and methods:

The research sample is population-based and consists of data participants from cohort group of 10,001 Dalmatians. The study included 158 data participants older than 55 years with ARMD and 4468 control participants who did not have ARMD or any other retinal disease. All participants underwent a standard ophthalmic exam, their fundus photography was recorded, and a blood sample was taken for glycan analysis. The colour fundus photographs with a clearly visible macular area were analysed according

g to the International Classification for ARMD from 1995. According to this classification, the grading of ARMD is based on colour fundus photography and two forms of such grading are to be distinguished: a) the early stage disease with the presence of drusen and/or abnormalities of the retinal pigment epithelium and b) the late stage: the neovascular wet or dry form leading to geographical atrophy. Both groups were equalized in accordance with age, sex as well as other related comorbidities. After adequate storage and preparation, plasma was isolated from blood samples and subjected to the standard procedure of isolation of immunoglobulin G (IgG) on sodium dodecyl sulfate-polyacrylamide gel and glycans release with IgG using microtiter G-monolithic plate and glycosidases. Detection of glycans released with IgG and glycans on other plasma proteins was performed by high-performance liquid chromatography and mass spectrometry. Data were analysed with the assumption of a research power (P) of 80% and a significance level (α) of 0.05. A multivariate model was used in which age (> 55 years) and sex were the control variants to reduce the influence of the latter on the outcome variable - ARMD, while the logistic regression test examined the influence of several variables simultaneously on the incidence of the very disease (related comorbidities as risk factors for ARMD).

Results:

Out of 158 participants with ARMD, there were 133 (84.18%) participants with early stage disease and 25 (15.82%) with the late stage. Of these, 66 (41.78%) were male and 92 (58.22%) were female. The median age of men was 79.8 years (min.-max.: 55-89), and of women 80.7 years (min.-max.: 55-90). A total of 70 plasma glycans were analysed. Elevated plasma glycans in participants with ARMD are: B1_DG12 (examined group: 0.84 ± 0.37 (0.36-2.29); control group: 0.79 ± 0.31 (0.1-2.46) P 0.029), B1_DG13* (0.79 ± 0.46 (0.28-2.3); 0.68 ± 0.28 (0.18-2.45) P 0.005), B1_A-FUC (3.31 ± 1 (1.79-6.51); 3.09 ± 0.9 (1.43-11.05) P 0.057), B1_IgG_GP1* (0.22 ± 0.2 (0.05-1.06); 0.17 ± 0.17 (0.02-1.91) P 0.009), B1_IgG_GP11* (0.77 ± 0.16 (0.42-1.11); 0.73 ± 0.18 (0.15-2.58) P 0.068), B1_IgG_GP13* (0.27 ± 0.14 (0.12-0.98); 0.24 ± 0.12 (0.08-1.71) P 0.098), B1_IgG_GP16* (3.22 ± 0.45 (2.35-4.88); 3.08 ± 0.52 (1.71-11.16) P 0.031), B1_IgG_GP20* (0.6 ± 0.43 (0.14-2.26); 0.49 ± 0.39 (0.07-3.46) P 0.021). Reduced concentration glycan in participants with ARMD: B1_IgG_GP14* (11.15 ± 3.55 (4.81-20.94); 12.09 ± 3.85 (3.39-26.96) P 0.052). Glycans marked with star* have a dose effect that correlates with the stage of the disease. The effect of dose DG13 was determined by the logistic regression test ($\beta=0.08$ [95% CI 0.01-0.6]; P=0.014) and the multivariate model also proposed glycan DG13 as an age- and sex-adapted molecule.

Conclusion:

Glycosylation is a process of posttranslational modification by which monosaccharides bind to amino acids of proteins, which makes them their integral structural and functional component. Changes in glycosylation are reflected during the aging process and in healthy individuals after 50 years of life, in various acute and chronic conditions. The changes start in the early acute phase and are well-known markers of disease progression. Key in the pathogenesis of ARMD is oxidative stress in which inflammatory-immune-neovascular response proteins are subject to changes in the glycosylation pattern. The study sh

owed that participants with age-related macular degeneration had a different plasma profile of glycosylated proteins compared to the control one, which correlates with the stage of the disease, therefore there is a possibility of using them as potential biomarkers.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU MLADI U OFTALMOLOGIJI / Young Ophthalmologist Section

Titula / Title:

Dr.

Specijalizant / Resident

Ime i prezime / First and Last Name:-First

Ivona

Ime i prezime / First and Last Name:-Last

Bućan

50. Eva Kos

Naslov:

Pad vidne oštine kao vodeći simptom tumora paranazalnih sinusa

Autori:

Eva Kos, Biljana Kuzmanović Elabjer, Daliborka Miletić, Mladen Bušić

Ustanova:

Klinika za očne bolesti, Klinička bolnica „Sveti Duh“, Zagreb, Medicinski fakultet Osijek, Fakultet za dentalnu medicinu i zdravstvo Osijek Sveučilišta J.J. Strossmayera u Osijeku, Referentni centar Ministarstva zdravstva za dječju oftalmologiju i strabizam

Cilj:

Prikazati slučaj pacijentice s tumorom paranazalnih sinusa koji se primarno prezentirao očnim simptomima.

Bolesnici i metode:

Pedesetsedmogodišnja pacijentica primljena je na našu Kliniku zbog progresivnog pada vidne oštine na desnom oku unatrag četiri mjeseca, uz dojam izbočenja desnog oka unazad mjesec dana. Sedam mjeseci ima učestalije glavobolje, osobito u području desnog oka. Pri dolasku najbolje korigirana vidna oština na desnom oku bila je brojanje prstiju pred okom, dok je na lijevom oku bila 0,6 po Snellenu. Nađena je obostrana proptoza, 22 mm desno i 19 mm lijevo prema Hertelju, s gotovo urednom bulbomotorikom, osim blage insuficijencije konvergencije desnog oka. Uočena je obostrana retrakcija gornje vjeđe, više na desnom oku, bez "lateral flare". Pregled na biomikroskopu je, osim početne katarakte na oba oka, bio bez osobitosti. Pregledom očne pozadine ustanovljena je početna epiretinalna membrana na desnom oku, što je potvrđeno OCT-om. Intraokularni tlak je bio normalan na oba oka. Ehografski, B-prikazom, detektira se ekstrakonični defekt orbitalnog eha inferonazalno prema etmoidnom sinusu. Neoštro je ograničen, blizu je bulbusa koji ne deformira. Iza defekta orbite dobije se propagacija ultrazvuka u paranazalni sinus. Na standardiziranoj ehografiji lezija je debljine do 13 mm i visoke unutarnje ehogenosti, iregularne građe. MSCT i MR 3T orbita i sinusa prikazali su opsežnu ekspanzivnu tvorbu mekotkivnog denziteta unutar paranazalnih šupljina u području etmoidnih celula koje su gotovo u potpunosti destruiranih septa, zatim u području lamine papiracea obostrano, izraženije s desne strane te u području septuma te gornjih i srednjih nosnih školjki sa širenjem u sfenoidni sinus. Učinjena je i laboratorijska obrada te ORL pregled.

Rezultati:

Postavljena je sumnja na maligni proces paranazalnih sinusa i pacijentica je upućena na Kliniku za kirurgiju lica, čeljusti i usta na daljnu obradu i liječenje.

Zaključak:

Tumori paranazalnih sinusa su rijetki. Zbog svoje lokalizacije često ostaju neprepoznati sve do uznapredovalog stadija bolesti. Zbog širenja u orbitu mogu se prezentirati simptomima i znakovima bolesti oka i orbite.

Title:

Vision deterioration as the presenting symptom of paranasal sinus tumor

Authors:

Eva Kos, Biljana Kuzmanović Elabjer, Daliborka Miletić, Mladen Bušić

Institution:

University Eye Clinic, University Hospital "Sveti Duh", Zagreb, Faculty of Medicine Osijek, Faculty of dental medicine and health care Osijek, University Josip Juraj Strossmayer in Osijek, Reference center of the Ministry of Health of the Republic of Croatia for pediatric ophthalmology and strabismus

Aim:

To present a case of a patient with a paranasal sinus tumor primarily presented with ocular symptoms.

Patients and methods:

A 57-year-old female was admitted to our Clinic due to progressive decrease of visual acuity in her right eye for the past four months, with the impression of a bulging of the right eye since last month. She notes more frequent headaches, especially in the right eye area for the past seven months. At referral her best corrected visual acuity (BCVA) on Snellen chart was finger counting in the right eye (OD) and 0.6 in the left eye (OS). Bilateral proptosis was found, that is 22 mm OD and 19 mm OS according to Hertel, with almost normal ocular motility, except for slight convergence insufficiency of a right eye. Bilateral retraction of the upper eyelid was observed, more on the right, without "lateral flare". Slit lamp examination was notable for immature cataract but was otherwise unremarkable. Fundus examination revealed incipient epiretinal membrane on a right eye, which was confirmed with OCT. Intraocular pressure was normal in both eyes. B-scan echography of the right eye revealed an extraconic defect of the orbital echo inferonasally towards the ethmoid sinus. It is vaguely demarcated, near the bulb that does not deform. Behind the defect of the orbital echo the propagation of ultrasound into the paranasal sinus is obtained. On standardized ultrasound the lesion is up to 13 mm with high internal echogenicity and inhomogeneous structure. MSCT and MR 3T of orbits and sinuses revealed extensive expansive soft tissue density formation within paranasal cavities located in the area of ethmoid cells with completely destroyed septa, lamina papyracea bilaterally, more prominent on the right, as well as destroyed septum, with progression to upper and middle nasal conchae and spreading to the sphenoid sinus. Patient also underwent laboratory testing and ENT examination.

Results:

The malignant process of the paranasal sinuses was suspected and the patient was referred to the Department of Oral and Maxillofacial Surgery for further assessment and treatment.

Conclusion:

Paranasal sinus tumors are rare. Due to their localization, they often remain unrecognized until the advanced stage of the disease. Due to spreading to the orbit, they may initially present with symptoms and signs characteristic for ocular and orbital disease.

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Titula / Title:

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Kos

51. Barun Ivana

Naslov:

Atipični optički neuritis (prikaz slučaja)

Autori:

Barun I, Sušac T

Ustanova:

Klinika za očne bolesti KBC Split

Cilj:

Prikazati slučaj bolesnika s atipičnim optičkim neuritisom oba oka, široku dijagnostičku obradu i primijenjeni terapijski algoritam

Bolesnici i metode:

Pacijent u dobi 37 godina, Indijac, prethodno zdrav, prezentirao se s akutnim padom vidne oštrine lijevog oka do razine amauroze. Nakon dijagnostičke obrade uvedena je pulsna kortikosteroidna terapija, a potom je postupno smanjivana dnevna doza kortikosteroida, no 4 dana od završetka terapije pacijent se javio zbog ponovnog pogoršanja vida na lijevom oku do amauroze, ovaj put uz pad vidne oštrine i na desnom oku. Ponovno se pristupilo opširnoj dijagnostičkoj obradi uz dijagnozu atipičnog optičkog neuritisa te je ponovljena pulsna, a potom i prolongirana kortikosteroidna terapija po završetku koje je planirana imunosupresivna terapija.

Rezultati:

Optički neuritis lijevog oka s padom vidne oštrine na razinu amauroze tretiran je kortikosteroidnom terapijom po završetku koje dolazi do brzog relapsa i prezentacije atipičnog optičkog neuritisa na oba oka. Ponovljena pulsna kortikosteroidna terapija te postupno smanjivanje doze održavanja doveli su do dobrog oporavka vidne oštrine desnog oka te minimalnog oporavka vidne oštrine lijevog oka.

Zaključak:

Atipični optički neuritisi s atipičnim oftalmološkim i radiološkim nalazom, za razliku od tipičnog oblika, zahtijevaju agresivniju, često i imunosupresivnu terapiju i kao takvi trebaju biti prepoznati.

Title:

Atypical Optic Neuritis (case report)

Authors:

Barun I, Sušac T

Institution:

University Hospital of Split

Aim:

To show a case of atypical optic neuritis of both eyes, extensive diagnostic workup and applied therapeutic algorithm

Patients and methods:

Patient aged 37, Indian, previously healthy, presented with acute loss of vision of left eye to the point of amaurosis. After diagnostic work up, pulse corticosteroid therapy was administered, then daily dose of corticosteroids was tapered gradually. 4 days after terminating corticosteroid therapy the patient presented with a repeated decrease in left eye visual acuity to the point of amaurosis, but also decrease in right eye visual acuity. Extensive diagnostic work up was done once again, and pulse corticosteroid therapy was readministered, followed by prolonged daily corticosteroids. After termination of corticosteroid therapy, immunosuppression with azathioprine was planned.

Results:

Left eye optic neuritis which led to loss of vision to the point of amaurosis was treated with corticosteroid therapy, but, after termination of said therapy, there was a rapid relapse with atypical optic neuritis presenting on both eyes. Repeated pulse corticosteroid therapy and gradual tapering of maintenance dose led to good recovery of right, and minimal recovery of left eye visual acuity.

Conclusion:

Atypical optic neuritis with atypical ophthalmological and radiological findings, unlike typical for MS, require a more aggressive and often immunosuppressive therapy and should be recognized as such.

Kongres / Congresse:

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Ivana

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Barun

52. Bućan Ivona

Naslov:

Glikozilirani proteini kao biomarkeri senilne makularne degeneracije

Autori:

Bućan Ivona (1), Polašek Ozren (2), Pleština Borjan Ivna (1), Borjan Ivan (1), Marković Irena (1), Bućan Kajo (1)

Ustanova:

(1) Klinika za očne bolesti, KBC Split; (2) Medicinski fakultet Sveučilišta u Splitu

Cilj:

Primarni cilj istraživanja je otkrivanje glikozilacijskih komponenti na proteinima u plazmi kao potencijalnih biomarkera pojavnosti senilne makularne degeneracije.

Bolesnici i metode:

Uzorak za istraživanje je populacijski i čine ga ispitanici iz kohorte 10.001 Dalmatinac. Istraživanje je uključilo 158 ispitanika starijih od 55 godina sa senilnom makularnom degeneracijom i 4468 kontrolnih ispitanika koji nemaju senilnu makularnu degeneraciju niti bilo koju drugu mrežničnu bolest. Svim ispitanicima je napravljen opći oftalmološki pregled, snimljena očna pozadina (fundus fotografija) i uzet uzorak krvi za analizu glikoziliranih proteina. Fundus fotografije s jasno vidljivim makularnim područjem analizirane su prema Međunarodnoj klasifikaciji senilne makularne degeneracije iz 1995. Prema toj klasifikaciji, stupnjevanje senilne makularne degeneracije temelji se na fundus fotografijama u boji te se razlikuje: a) rani stadij bolesti s nazočnim druzama i/ili abnormalnostima retinalnog pigmentnog epitela i b) kasni stadij neovaskularne vlažne forme ili suhe forme u obliku geografske atrofije. Obje skupine su ujednačene prema dobi, spolu i pridruženim drugim komorbiditetima. Iz uzoraka krvi, nakon adekvatne pohrane i pripreme, izolirana je plazma koja je podvrgnuta standardnoj proceduri izolacije imunoglobulina G (IgG) na natrijevom dodecil sulfat-

poliakrilamidnom gelu te oslobođanje glikana s IgG korištenjem mikrotitarske G-monolitne ploče i glikozidaza. Detekcija glikana oslobođenih s IgG i glikana na ostalim plazmatičkim proteinima proveda se tekućinskom kromatografijom visoke djelotvornosti i masenom spektrometrijom. Podaci su analizirani uz pretpostavku snage istraživanja (P) od 80% i razine značajnosti (α) od 0,05. Korišten je multivarijatan model u kojem su dob (>55 godine) i spol kao kontrolirajuće inačice ustaljene da bi se smanjio utjecaj istih na izlaznu varijablu - senilnu makularnu degeneraciju, dok se testom logističke regresije ispitaio utjecaj više varijabli istovremeno na pojavnost same bolesti (pridruženi komorbiditeti kao rizični čimbenici nastanka senilne makularne degeneracije).

Rezultati:

Od 158 ispitanika sa senilnom makularnom degeneracijom bilo je 133 (84,18%) ispitanika s ranim stadijem bolesti i njih 25 (15,82%) s kasnim stadijem. Od toga bilo je 66 (41,78%) muškaraca i 92 (58,22%) žene. Medijan životne dobi muškaraca iznosio je 79,8 godina (min.-maks.:55-

89), a žena 80,7 godina (min.-maks.:55-90). Analizirano je ukupno 70 glikana plazme. Glikani povišene razine koncentracije u plazmi kod ispitanika sa senilnom makularnom degeneracijom su: B1_DG12 (ispitivana skupina: 0,84±0,37 (0,36-2,29); kontrolna skupina: 0,75±0,31 (0,1-2,46) P 0,029), B1_DG13* (0,79±0,46 (0,28-2,3); 0,68±0,28 (0,18-2,45) P 0,005), B1_A-FUC (3,31±1 (1,79-6,51); 3,09±0,9 (1,43-11,05) P 0,057), B1_IgG_GP1* (0,22±0,2 (0,05-1,06); 0,17±0,17 (0,02-1,91) P 0,009), B1_IgG_GP11* (0,77±0,16 (0,42-1,11); 0,73±0,18 (0,15-2,58) P 0,068), B1_IgG_GP13* (0,27±0,14 (0,12-0,98); 0,24±0,12 (0,08-1,71) P 0,098), B1_IgG_GP16* (3,22±0,45 (2,35-4,88); 3,08±0,52 (1,71-11,16) P 0,031), B1_IgG_GP20* (0,6±0,43 (0,14-2,26); 0,49±0,39 (0,07-3,46) P 0,021). Glikan snižene razine koncentracije u ispitivanoj skupini: B1_IgG_GP14* (11,15±3,55 (4,81-20,94); 12,09±3,85 (3,39-26,96) P 0,052). Glikani označeni zvjezdicom* imaju efekt doze koji korelira sa stadijem bolesti. Testom logističke regresije ustanovljen je efekt doze glikana DG13 ($\beta=0,08$ [95%CI 0,01-0,61]; P=0,014), a multivarijatni model predložio je DG13 i kao molekulu koja je prilagođena dobi i spolu.

Zaključak:

Glikozilacija je proces posttranslacijske modifikacije kojom se monosaharidi vežu na aminokiselinske proteina, što ih čini njihovom integralnom strukturalnom i funkcionalnom komponentom. Glikozilacijske promjene odražavaju se tijekom procesa starenja i u zdravih pojedinaca nakon 50 godina života, u raznim akutnim i kroničnim stanjima, i to u ranoj akutnoj fazi te prate progresiju bolesti. Ključan u patogenezi senilne makularne degeneracije je oksidacijski stres u sklopu kojeg proteini upalno-imunološko-neovaskularnog odgovora podliježu promjenama obrasca glikozilacije. Istraživanje je pokazalo da ispitanici sa senilnom makularnom degeneracijom imaju različiti profil plazme glikoziliranih proteina u odnosu na kontrolnu skupinu, koji korelira sa stadijem bolesti, te se time otvara mogućnost korištenja istih kao potencijalnih biomarkera bolesti.

Title:

Glycosylated proteins as biomarkers of age-related macular degeneration

Authors:

Bučan Ivona (1), Polašek Ozren (2), Pleština Borjan Ivna (1), Borjan Ivan (1), Marković Irena (1), Bučan Kajo (1)

Institution:

(1) Clinic of Ophthalmology, Clinical Hospital Centre Split; (2) School of Medicine, University of Split

Aim:

The primary aim of the study is to detect glycosylated components on plasma proteins as potential biomarkers of age-related macular degeneration (ARMD).

Patients and methods:

The research sample is population-based and consists of data participants from cohort group of 10,001 Dalmatians. The study included 158 data participants older than 55 years with ARMD and 4468 control participants who did not have ARMD or any other retinal disease. All participants underwent a standard ophthalmic exam, their fundus photography was recorded, and a blood sample was taken for glycan analysis. The colour fundus photographs with a clearly visible macular area were analysed according

g to the International Classification for ARMD from 1995. According to this classification, the grading of ARMD is based on colour fundus photography and two forms of such grading are to be distinguished: a) the early stage disease with the presence of drusen and/or abnormalities of the retinal pigment epithelium and b) the late stage: the neovascular wet or dry form leading to geographical atrophy. Both groups were equalized in accordance with age, sex as well as other related comorbidities. After adequate storage and preparation, plasma was isolated from blood samples and subjected to the standard procedure of isolation of immunoglobulin G (IgG) on sodium dodecyl sulfate-polyacrylamide gel and glycans release with IgG using microtiter G-monolithic plate and glycosidases. Detection of glycans released with IgG and glycans on other plasma proteins was performed by high-performance liquid chromatography and mass spectrometry. Data were analysed with the assumption of a research power (P) of 80% and a significance level (α) of 0.05. A multivariate model was used in which age (> 55 years) and sex were the control variants to reduce the influence of the latter on the outcome variable - ARMD, while the logistic regression test examined the influence of several variables simultaneously on the incidence of the very disease (related comorbidities as risk factors for ARMD).

Results:

Out of 158 participants with ARMD, there were 133 (84.18%) participants with early stage disease and 25 (15.82%) with the late stage. Of these, 66 (41.78%) were male and 92 (58.22%) were female. The median age of men was 79.8 years (min.-max.: 55-89), and of women 80.7 years (min.-max.: 55-90). A total of 70 plasma glycans were analysed. Elevated plasma glycans in participants with ARMD are: B1_DG12 (examined group: 0.84 ± 0.37 (0.36-2.29); control group: 0.79 ± 0.31 (0.1-2.46) P 0.029), B1_DG13* (0.79 ± 0.46 (0.28-2.3); 0.68 ± 0.28 (0.18-2.45) P 0.005), B1_A-FUC (3.31 ± 1 (1.79-6.51); 3.09 ± 0.9 (1.43-11.05) P 0.057), B1_IgG_GP1* (0.22 ± 0.2 (0.05-1.06); 0.17 ± 0.17 (0.02-1.91) P 0.009), B1_IgG_GP11* (0.77 ± 0.16 (0.42-1.11); 0.73 ± 0.18 (0.15-2.58) P 0.068), B1_IgG_GP13* (0.27 ± 0.14 (0.12-0.98); 0.24 ± 0.12 (0.08-1.71) P 0.098), B1_IgG_GP16* (3.22 ± 0.45 (2.35-4.88); 3.08 ± 0.52 (1.71-11.16) P 0.031), B1_IgG_GP20* (0.6 ± 0.43 (0.14-2.26); 0.49 ± 0.39 (0.07-3.46) P 0.021). Reduced concentration glycan in participants with ARMD: B1_IgG_GP14* (11.15 ± 3.55 (4.81-20.94); 12.09 ± 3.85 (3.39-26.96) P 0.052). Glycans marked with star* have a dose effect that correlates with the stage of the disease. The effect of dose DG13 was determined by the logistic regression test ($\beta=0.08$ [95% CI 0.01-0.6]; P=0.014) and the multivariate model also proposed glycan DG13 as an age- and sex-adapted molecule.

Conclusion:

Glycosylation is a process of posttranslational modification by which monosaccharides bind to amino acids of proteins, which makes them their integral structural and functional component. Changes in glycosylation are reflected during the aging process and in healthy individuals after 50 years of life, in various acute and chronic conditions. The changes start in the early acute phase and are well-known markers of disease progression. Key in the pathogenesis of ARMD is oxidative stress in which inflammatory-immune-neovascular response proteins are subject to changes in the glycosylation pattern. The study sh

owed that participants with age-related macular degeneration had a different plasma profile of glycosylated proteins compared to the control one, which correlates with the stage of the disease, therefore there is a possibility of using them as potential biomarkers.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

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Titula / Title:

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Ivona

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Bućan

53. Husić Cofek Anita

Naslov:

Odnos peripapilarne vaskularne gustoće i srednje osjetljivosti vidnog polja kod glaukomskih pacijenata u različitim stadijima bolesti

Autori:

Husić Cofek A, Vukelić S, Novak Lauš K, Kasumović A, Zorić Geber M, Vatavuk Z

Ustanova:

Klinika za očne bolesti, Klinički bolnički centar Sestre Milosrdnice, Zagreb, Hrvatska

Cilj:

Ispitati postoji li povezanost između peripapilarne vaskularne gustoće mjerene optičkom koherentnom tomografskom angiografijom i srednje osjetljivosti vidnog polja u različitim stadijima glaukoma.

Bolesnici i metode:

Slike mikrovaskularnih struktura i vrijednosti debljine sloja peripapilarnih živčanih vlakana mrežnice dobivene su pomoću sustava Optovue Angiovue u 90 ispitanika s glaukomom. Peripapilarna vaskularna gustoća (pVD) mjerena je na različitim prostornim lokacijama u programu AngioVue Analytics. Korišteni parametri bili su radijalna peripapilarna kapilarna gustoća (RPC - ukupno, unutar optičkog diska, peripapilarno, te po kvadrantima), te prosječna debljina sloja živčanih mrežničnih vlakana optičkog diska (RNFL ukupno i po kvadrantima). Vidno polje je izvedeno na Octopus 900 uređaju. Korištene su vrijednosti srednje osjetljivosti (MS) i srednjeg defekta (MD). Odnos između regionalne gustoće peripapilarne vaskulature i srednje osjetljivosti vidnog polja mjerene je u odvojenim skupinama bolesnika, ovisno o stadiju glaukoma. Stadij glaukoma određen je prema kriterijima Hoddap-Parrish-Anderson .

Rezultati:

U ukupnom broju ispitivanih očiju (n=90) dobivena je statistički značajna povezanost između pVD i MS ($p < 0.02$). U ranom stadiju glaukoma statistički je značajna povezanost između MS i RNFL u nazalnom kvadrantu ($p = 0.023$) i temporalnom kvadrantu ($p < 0.001$). Kod uznapredovalog glaukoma statistički je značajna korelacija između srednje osjetljivosti vidnog polja i radijalne peripapilarne kapilarne gustoće - ukupne, peripapilarne te u superiornom i temporalnom kvadrantu ($p < 0.05$). Statistički značajne su razlike u svim varijablama po stadijima glaukoma ($p < 0.02$).

Zaključak:

Regionalna gustoća peripapilarne vaskularne mreže mjerena optičkom koherentnom tomografskom angiografijom značajno je povezana s odgovarajućom srednjom osjetljivošću vidnog polja kod uznapredovalog glaukoma

Title:

Connection between peripapillary vascular density and visual field sensitivity in glaucoma patients according to disease severity

Authors:

Husić Cofek A, Vukelić S, Novak Lauš K, Kasumović A, Zorić Geber M, Vatauvuk Z

Institution:

University Department of Ophthalmology, University Hospital Center Sestre milosrdnice, Zagreb, Croatia

Aim:

To investigate the potential relationship between peripapillary vascular density estimated by optical coherence tomography angiography and visual field mean sensitivity at different glaucoma stages.

Patients and methods:

Microvascular images and peripapillary retinal nerve fiber layer thicknesses were evaluated using Optovue Angiovue imaging system in 90 glaucoma subjects. Peripapillary vascular density (pVD) was measured at various spatial locations using AngioVue Analytics. Measured parameters were radial peripapillary capillary density (RPC – whole image, inside disc, peripapillary, and within the quadrants), and retinal nerve fiber layer thickness (RNFL total and within the quadrants). Visual field was performed on Octopus 900. Mean sensitivity (MS) and mean defect (MD) values were used. The relationship between regional vasculature function and average visual field sensitivity was analyzed in separate patient groups, according to the stage of glaucoma. The glaucoma stage was rated using Hoddap-Parrish-Anderson criteria.

Results:

Overall (n= 90) there was a statistically significant relationship between pVD and MS ($p < 0.02$). In early stage of glaucoma there was statistically significant correlation between MS and RNFL in nasal quadrant ($p = 0,023$) and temporal quadrant ($p < 0.001$). In advanced glaucoma, there was a statistically significant correlation between RPC- total, peripapillary, and in the S and T quadrants, and MS ($p < 0.05$). There were statistically significant differences in all variables according to the glaucoma stage ($p < 0.02$).

Conclusion:

Regional peripapillary vascular density measured by optical coherence tomography angiography was significantly associated with corresponding visual field mean sensitivity in advanced glaucoma.

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Abstract category / Sažetak prijavljujem u:

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Anita

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Husić Cofek

54. Ivana Jonjić

Naslov:

Clostridium septicum endogenous panophthalmitis with cellulitis as first presentation of colon adenocarcinoma: a case report and review of literature

Autori:

Ivana Jonjić, Josip Knežević, Igor Petrović, Sanja Perić, Jelena Juri Mandić

Ustanova:

Klinika za oftalmologiju, Klinički bolnički centar Zagreb, Medicinski fakultet Zagreb.

Cilj:

Prikaz slučaja bolesnika sa endogenim Clostridium septicum panophthalmitisom i celulitisom kao prvom prezentacijom adenokarcinoma debelog crijeva.

Bolesnici i metode:

Prikaz slučaja i pregled literature

Rezultati:

Bolesnik u dobi od 80 godina, dobrog zdravlja, bez anamneze očne traume ili operacije, primljen je na OHBP sa simptomima smanjene oštrine vida, gnojnog iscjetka i boli u lijevom oku. U slijedećih 12 sati dolazi do oticanja kapaka, periokularne hiperemije, zamućenja i edema rožnice, kemoze, miješane injekcije uz plitku prednju sobicu s Tyndallom 4+ i fibrinskom mrežicom u zjeničnom otvoru. Šarenica i detalji stražnjeg segmenta oka teško su se mogli razaznati. Ultrazvuk je pokazao guste hiperehogene intravitrealne odjeke i zadebljanje kokrioretine. Započeta je sustavna intravenska terapija antibioticima s manitolom i acetazolamidom te je bolesnik hitno pripremljen za dijagnostičku vitrektomiju koja se pokazala pozitivnom na Clostridium septicum. Sustavno liječenje uključivalo je kolonoskopiju koja je otkrila ulceroznu leziju na hepatici fleksi. Izvršena je desna hemikolektomija uz evisceraciju bulbosa i postavljanje drena. Postoperativski tijek je protekao bez poteškoća, a pacijent je otpušten u stabilnom stanju uz onkološke preporuke.

Zaključak:

Clostridium septicum je rijedak oportunistički patogen čiji se nalaz često može povezati s malignim bolestima, najčešće hematološkog ili crijevnog podrijetla. Panophthalmitisi uzrokovani bakterijama vrste Clostridium uglavnom su egzogeni. Zbog jakih toksina, bolesnici s klostridijalnom infekcijom obično napreduju vrlo brzo. Rano prepoznavanje, brza i agresivna terapija intravenoznim antibioticima i uklanjanje zaraženog tkiva od velike su važnosti u bolesnika kod kojih postoji sumnja na infekciju C. septicum.

Title:

Clostridium septicum endogenous panophthalmitis with cellulitis as first presentation of colon adenocarcinoma: a case report and review of literature

Authors:

Ivana Jonjić, Josip Knežević, Igor Petrović, Sanja Perić, Jelena Juri Mandić

Institution:

Department of Ophthalmology, Clinical Hospital Centre Zagreb, School of Medicine, Zagreb, Croatia.

Aim:

A case of a patient with endogenous Clostridium septicum panophthalmitis with cellulitis as a first presentation of colon adenocarcinoma.

Patients and methods:

Case report and review of the literature

Results:

An 80-year-

old male patient, in good health, with no history of ocular trauma or surgery, was admitted to the Emergency Dpt. with symptoms of decreased visual acuity, purulent discharge and pain in the left eye. 12 hours later exam showed eyelids swelling cloudy oedematous cornea, chemosis, conjunctival and ciliary injection, shallow anterior chamber with Tyndall 4+ and pupillary fibrin mesh. Iris and posterior eye segment details were hardly discernible. The ultrasound showed severe levels of vitreous debris and choroidal thickening. Systemic intravenous antibiotics therapy with manitol and acetazolamide was started and he was urgently prepared for diagnostic vitrectomy which came back as positive for Clostridium septicum.

Systemic workup included colonoscopy which revealed an ulcerative lesion at the hepatic flexure. A right hemicolectomy simultaneously with eye evisceration and drainage was performed. Postoperative course was uneventful, and the patient was discharged in stable condition with ophthalmologic recommendations.

Conclusion:

Clostridium septicum is a rare opportunistic pathogen whose finding can often be related to malignancies, most commonly of haematologic or intestinal origin. Endophthalmitis caused by bacteria of the Clostridium species are mostly exogenous. Because of its strong toxins, patients with clostridial infection usually have a very rapid progress of their disease. Early recognition, prompt and aggressive therapy with intravenous antibiotics and removal of infected tissue are of great importance in patients with suspicion of C. septicum infection.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA ORBITU / Orbit section

Titula / Title:

Dr.

Specijalizant / Resident

Ime i prezime / First and Last Name:-First

Ivana

Ime i prezime / First and Last Name:-Last

Jonjić

55. Matutinović Odak Željana

Naslov:

Pitanje radne snage i budućnosti dječje oftalmologije

Autori:

Matutinović Odak Ž, Ljubić Ž, Vučinović A

Ustanova:

Klinika za očne bolesti KBC Split

Cilj:

Prikazati i identificirati faktore koji utječu na odabir subspecijalizacije kod mladih oftalmologa. Ukazati na probleme i razloge sve manjeg interesa za dječju oftalmologiju i strabologiju.

Bolesnici i metode:

Proveli smo anonimni upitnik na specijalizantima oftalmologije i optometrije te specijalistima s manje od 5 godina specijalističkog staža, zaposlenima u Hrvatskoj, u siječnju 2020. godine. Upitnik se sastojao od demografskih podataka o ispitaniku (dob, spol, godine staža), 12 tvrdnji koje su ocijenjivane Likertovom ljestvicom u 5 točaka te upitnika samoprocjene. Podatci su kategorizirani po dobi, spolu i godinama staža.

Rezultati:

Sudjelovalo je 45 ispitanika (33 specijalizanta, 12 specijalista). Među ispitanicima je bilo 60% žena i 40% muškaraca. Prosječna dob ispitanika bila je 32 godine. Veći broj ispitanika (42%) označio je prednji segment kao prvi izbor za subspecijalizaciju, a njih 16 (35%) označilo je stražnji segment kao prvi izbor. Dječju oftalmologiju kao prvi izbor označila su samo 3 ispitanika (6,6%). Dok je čak 17 ispitanika (37,7%) dječju oftalmologiju označilo kao najmanje privlačnu subspecijalizaciju. Većina (73,3%) je izjavila da za vrijeme specijalizacije nisu imali dovoljan kontakt s dječjom oftalmologijom i strabologijom. Veliki broj ispitanika (82%) smatra da su pedijatrijski pacijenti teški za pregled te da je dječja oftalmologija intelektualno izazovna.

Zaključak:

Zadnjih nekoliko godina ubrzano se smanjuje interes za dječjom oftalmologijom i strabologijom. Veliki broj dječjih oftalmologa odlazi u mirovinu i ostaje pitanje Tko će pregledavati našu djecu? Neadekvatna dostupnost, naporan rad, otežani pregledi djece, odvrćaju mlade oftalmologe od ove subspecijalizacije. Smatram da ćemo morati uložiti veće napore u organiziranje predavanja, video konferencija i kliničkih radionica koje će potaknuti zanimanje liječnika i povezati ih sa svojim uzorima. Prisustvovanje konferencijama i izlaganje istraživačkih radova također može motivirati liječnike u ranoj fazi njihove karijere i probuditi njihovu intelektualnu znatiželju na ovom polju. Ti se napori mogu uložiti na individualnoj, regionalnoj i nacionalnoj razini.

Title:

The question of the workforce and the future of pediatric ophthalmology

Authors:

Matutinovic Odak Z, Ljubic Z, Vucinovic A

Institution:

Department of Ophthalmology, University Hospital Centre Split

Aim:

To present and identify factors influencing the choice of subspecialization in young ophthalmologists. To point out the problems and reasons for the declining interest in pediatric ophthalmology and strabology.

Patients and methods:

We conducted an anonymous questionnaire on ophthalmology and optometry residents and specialists with less than 5 years of specialist experience, employed in Croatia, in January 2020. The questionnaire consisted of demographic data (age, gender, years of service), 12 statements rated on a 5-point Likert scale, and a self-assessment questionnaire. Data was categorized by age, gender and years of service.

Results:

45 respondents (33 residents, 12 specialists) participated. Among the respondents, 60% were women and 40% were men. The average age of the respondents was 32. Majority of respondents (42%) marked the anterior segment as their first choice for subspecialization, and 16 of them (35%) marked the posterior segment as their first choice. Only 3 subjects (6.6%) selected pediatric ophthalmology as their first choice. While as many as 17 respondents (37.7%) marked pediatric ophthalmology as the least attractive subspecialization. The majority (73.3%) stated that they did not have sufficient contact with pediatric ophthalmology and strabology during their resident time. A large number of respondents (82%) believe that pediatric patients are difficult to examine and that pediatric ophthalmology is intellectually challenging.

Conclusion:

In the last few years, interest in pediatric ophthalmology and strabology has been rapidly declining. A large number of pediatric ophthalmologists are retiring and the question remains Who will examine our children? Inadequate accessibility, hard work, difficult examinations of children, discourage young ophthalmologists from this subspecialization. We believe that we will have to make greater effort in organizing lectures, video conferences and clinical workshops that will stimulate the interest of the residents and connect them with their role models. Attending conferences and exhibiting research papers can also motivate physicians early in their careers and awake their intellectual curiosity in this field. These efforts can be made at the individual, regional and national levels.

Kongres / Congress:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA PEDIJATRIJSKU OFTALMOLOGIJU I STRABIZAM / Pediatric Ophthalmology and Strabismus section

Titula / Title:

Dr.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Željana

Ime i prezime / First and Last Name:-Last

Matutinović Odak

56. Sonja Jandroković

Naslov:

Selektivna laserska trabekuloplastika kao dodatna terapija u pacijenata s glaukomom koji su bili na medikamentoznoj terapiji

Autori:

Sonja Jandroković, Ivan Škegro, Dina Lešin Gaćina, Sania Vidas Pauk, Marina Tomić*

Ustanova:

KBC Zagreb, *Sveučilišna klinika Vuk Vrhovac KB Merkur Zagreb

Cilj:

Procijeniti učinak selektivne laserske trabekuloplastike (SLT) kao dodatne terapije za primarni glaukom otvorenog kuta, primarni glaukom zatvorenog kuta i sekundarni glaukom (PEX i pigmentni) u pacijenata koji su liječeni medikamentoznom terapijom (2-4 lijeka)

Bolesnici i metode:

Retrospektivno istraživanje 47 pacijenata s glaukomom liječenih SLT -om zbog nedostatne kontrole intraokularnog tlaka (IOT), alergije ili reakcije na lijekove za glaukom. Pacijenti su primali SLT u standardnom protokolu. Podaci su zabilježeni 0. dan (prije SLT -a), 1. dan i 1. mjesec nakon SLT -a. Uspjeh je definiran kao smanjenje IOT -a koje prelazi 20% IOT -a prije tretmana.

Rezultati:

Prije SLT-a, srednja vrijednost IOT -a kod svih pacijenata uključenih u studiju bila je $22,98 \pm 4,89$ mmHg, a medijan lijekova za glaukom bio je 2 (1-4). 1. mjesec nakon SLT -a, srednji IOT kod svih pacijenata značajno se smanjio na $19,13 \pm 4,79$ mmHg ($p < 0,001$). SLT je postigao više od 20% efekta snižavanja IOT -a u 22 (46,8%) oka. Medijan i postotak učinka snižavanja IOT -a u svim tretiranim očima bili su 4 (0-12) mmHg i 17,6 (0-40,9) %. Učinak snižavanja IOT -a bio je pozitivno koreliran samo s vrijednošću IOT -a prije SLT -a ($p < 0,001$). Broj lijekova prije liječenja SLT -om nije utjecao na smanjenje IOP -a nakon liječenja SLT -om ($p = 0,413$). Međutim, medijan broja lijekova nakon SLT -a značajno se smanjio na 2 (0-3) ($p = 0,021$).

Zaključak:

SLT kao dopunsko liječenje dodatno smanjuje IOT i utječe na smanjenje broja lijekova što može smanjiti lokalne i sustavne nuspojave koje mogu dovesti do boljeg pridržavanja pacijenata terapiji glaukoma. Smanjenje IOT -a SLT -om slično je bez obzira na broj lijekova za glaukom, i učinak liječenja nije veći među bolesnicima koji primaju manje lijekova za glaukom. SLT je korisna metoda liječenja i kada se primjenjuje u pacijenta koji su na maksimalnoj medikamentoznoj terapiji.

Title:

Selective laser trabeculoplasty as additional therapy in glaucoma patients who were on medical therapy

Authors:

Sonja Jandroković, Ivan Škegro, Dina Lešin Gaćina, Sania Vidas Pauk, Marina Tomić*

Institution:

KBC Zagreb, *Sveučilišna klinika Vuk Vrhovac KB Merkur Zagreb

Aim:

To evaluate the role of selective laser trabeculoplasty (SLT) as an additional therapy for the primary open-angle glaucoma (POAG), primary angle-closure glaucoma (PACG), and secondary glaucoma (PEX and pigmentary) in patients who were initially on the medical therapy (2-4 medication).

Patients and methods:

A retrospective review of 47 glaucoma patients treated by SLT for insufficient intraocular pressure (IOP) control, allergy, or discomfort to glaucoma medication. Patients received SLT in a standard protocol. Data were recorded on the 0th day (before SLT), the 1st day, and the 1st month after SLT. Success was defined as an IOP lowering exceeding 20% of pretreatment IOP.

Results:

Before SLT, the mean of IOP in all patients included in the study was 22.98 ± 4.89 mmHg, and the median of glaucoma medications was 2 (1-4). 1st month after SLT, a mean IOP in all patients significantly decreased to 19.13 ± 4.79 mmHg ($p < 0.001$). SLT achieved more than 20% IOP lowering effect in 22 (46.8%) eyes. The median and percentage of IOP lowering effect in all treated eyes were 4 (0-12) mmHg and 17.6 (0-40.9) %. The IOP lowering effect was positively correlated only with the value of IOP before SLT ($p < 0.001$). Number of medications before SLT treatment did not influence the IOP decrease after the SLT treatment ($p = 0.413$). However, the median of the number of medications after SLT reduced significantly to 2 (0-3) ($p = 0.021$).

Conclusion:

SLT as a supplementary treatment additionally reduces IOP and the number of local medications which may reduce local and systemic side-effects that can lead to better patients' adherence to glaucoma therapy. IOP reduction by SLT is similar regardless of the number of glaucoma medications, and the number of responders is not greater among patients receiving fewer glaucoma medications. SLT is also a useful method of IOP treatment when used in patients who are on maximal drug therapy.

Kongres / Congress:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA GLAUKOM / Glaucoma section

Titula / Title:

Dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Sonja

Ime i prezime / First and Last Name:-Last

Jandroković

57. Dora Martinčević

Naslov:

Nova anti-VEGF terapija pomiče granice- brolocizumab (Beovu)

Autori:

Dora Martinčević, Damir Bosnar, Mladen Bušić, Mirjana Bjeloš, Biljana Kuzmanović Elabjer, Juric a Predović, Senad Ramić, Mira Knežić

Ustanova:

Klinika za očne bolesti, Klinička bolnica „Sveti Duh“, Zagreb, Medicinski fakultet Osijek, Fakultet z a dentalnu medicinu i zdravstvo Osijek, Sveučilišta J.J. Strossmayera u Osijeku Referentni centar Ministarstva zdravstva za dječju oftalmologiju i strabizam

Cilj:

Analiza učinkovitosti, sigurnosti i protokola liječenja novim humaniziranim protutijelom brolociz umabom koji djeluje inhibitorno na sve 3 izoforme VEGF-A.

Bolesnici i metode:

Objavljeni pregledni radovi i klinička istraživanja analizirani su u bazama podataka PubMed i Up ToDate pomoću ključnih riječi: brolocizumab, anti-VEGF, HAWK, HARRIER, neovaskularna senilna makularna degeneracija (nAMD), novi anti-VEGF lijek, fragmentno jednolančano protutijelo.

Rezultati:

Identificirano je i analizirano ukupno 12 preglednih radova i kliničkih istraživanja. Primjenom brolocizumaba moguće je proširiti terapijski prozor do čak 12 tjedana u usporedbi s 8-tjednim ciklusom primjene aktualnih anti-VEGF lijekova, uz poboljšanje funkcionalnih (najbolja korigirana vidna oštrina) i anatomskih isho da (debljina središnjeg potpolja, prisutnost intraretinalne i subretinalne tekućine) aktivnosti bol esti. Nuspojave brolocizumaba i aflibercepta bile su usporedive, a intraretinalno i subretinalno povlačenje tekućine bilo je znatnije na očima liječenima brolocizumabom.

Zaključak:

Poboljšanje ili očuvanje najbolje korigirane vidne oštrine glavni je cilj liječenja neovaskularne se nilne makularne degeneracije. Unatoč dokazanoj učinkovitosti postojećih anti-VEGF lijekova (bevacizumab, ranibizumab i aflibercept), postoji potreba za uvođenjem još efikas nijeg anti-VEGF lijeka u svakodnevnu kliničku praksu. Studije faze III dokazale su da je primjenom brolociz umaba svakih 12 tjedana moguće učinkovito i sigurno zaustaviti progresiju bolesti, istovremeno smanjujući opterećenje nastalo učestalom primjenom anti-VEGF lijekova kod pacijenata s neovaskularnom senilnom makularnom degeneracijom.

Title:

New anti-VEGF therapy pushes the boundaries – brolocizumab (Beovu)

Authors:

Dora Martinčević, Damir Bosnar, Mladen Bušić, Mirjana Bjeloš, Biljana Kuzmanović Elabjer, Jurica Predović, Senad Ramić, Mira Knežić

Institution:

University Eye Clinic, University Hospital "Sveti Duh", Zagreb, Faculty of Medicine Osijek, Faculty of dental medicine and health care Osijek, University Josip Juraj Strossmayer in Osijek Reference center of the Ministry of Health of the Republic of Croatia for pediatric ophthalmology and strabismus

Aim:

To analyze the efficacy and safety of the new humanized antibody brolocizumab administration and its treatment regimen, having an inhibitory effect on all 3 isoforms of VEGF-A.

Patients and methods:

Published reviews and clinical trials in PubMed and UpToDate databases were analyzed using keywords: brolocizumab, anti-VEGF, HAWK, HARRIER, neovascular age-related macular degeneration (nAMD), novel anti-VEGF agent, single chain antibody fragment.

Results:

12 reviews and clinical trials were identified and analyzed. Studies have proved brolocizumab can expand the therapeutic window up to 12 weeks compared to 8 week administration cycle of current anti-VEGF drugs while improving functional (best-corrected visual acuity) and anatomical outcomes (central subfield thickness, intraretinal and subretinal fluid resolution). Brolocizumab and aflibercept adverse events were comparable, while intraretinal and subretinal fluid resolution was in favor of brolocizumab-treated eyes.

Conclusion:

Improving or maintaining the best-corrected visual acuity is the main goal of the neovascular age-related macular degeneration treatment. Despite the proven efficacy of the first-line anti-VEGF drugs (bevacizumab, ranibizumab and aflibercept), there is an unmet need to introduce even more effective anti-VEGF agent into everyday clinical practice. Phase III studies demonstrated that the brolocizumab 12-week regimen maintains efficacy and safety while reducing treatment burden in patients with nAMD.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU MLADI U OFTALMOLOGIJI / Young Ophthalmologist Section

Titula / Title:

Dr.

Specijalizant / Resident

Ime i prezime / First and Last Name:-First

Dora

Ime i prezime / First and Last Name:-Last

Martinčević

58. Miletić Daliborka

Naslov:

Dugoročni rezultati korekcije ptoze suspenzijom na čeonu mišić ("frontalis sling") – Foxova tehnika sa silikonskom cjevčicom

Autori:

Miletić Daliborka, Kuzmanović Elabjer Biljana, Bušić Mladen, Knežić Mira, Krtalić Lucija

Ustanova:

Klinika za očne bolesti, Klinička bolnica „Sveti Duh“, Zagreb, Medicinski fakultet Osijek, Fakultet za dentalnu medicinu i zdravstvo Osijek, Sveučilišta J.J. Strossmayera u Osijeku Referentni centar Ministarstva zdravstva za dječju oftalmologiju i strabizam

Cilj:

predstaviti našu kiruršku tehniku i dugoročne rezultate korekcije ptoze suspenzijom na čeonu mišić sa silikonskom cjevčicom.

Bolesnici i metode:

Ovo je retrospektivna studija bolesnika s ptozom gornje vjeđe sa slabom funkcijom levatora različite etiologije, koji su operirani na Klinici za očne bolesti Kliničke bolnice "Sveti Duh" u razdoblju od 2005. do 2019. godine, metodom "frontalis sling"- Foxova tehnika uz korištenje silikonske cjevčice. Prikupljeni su podatci o dobi, spolu, etiologiji ptoze, jednostranom ili obostranom zahvaćanju, pridruženim znakovima kao što je Marcus-Gunnov znak, intraoperativnim i postoperativnim komplikacijama te pojavnosti recidiva.

Rezultati:

Tijekom navedenoga razdoblja operirano je 65 vjeđa od 48 bolesnika, 31 s jednostranom i 17 s obostranom ptozom. Ukupno je bilo 17 žena i 31 muškarac, prosječne dobi od $21,4 \pm 26,6$ godina (raspon 1 mjesec-

76 godina, medijan 5 godina). Urođenu ptozu imalo je 83,3% bolesnika, a 16,7% stečenu. Prosječno vrijeme praćenja iznosilo je $5,5 \pm 3,6$ godina (raspon 1-

15 godina, medijan 4,5 godine), sa stopom recidiva od 16,9 % (11/65 vjeđa). Teže komplikacije na rožnici nisu zabilježene, a samo kod tri vjeđe došlo je do prolapsa silikonskog čvora bez znakova upale.

Zaključak:

Suspenzija na čeonu mišić ("frontalis sling") uobičajeni je kirurški postupak za korekciju izražene ptoze sa slabom funkcijom levatora.

U našoj ustanovi, silikonska cjevčica ostala je jedini suspenzijski material za "frontalis sling", od početka njegovoga izvođenja 1998. godine.

Prema našem saznanju, ovo je najduže vrijeme praćenje bolesnika operiranih tehnikom "frontalis sling" s pomoću silikona kao suspenzijskoga materijala. U našim rukama ova metoda polučila je izvrsne i stabilne rezultate kao jedina terapija urođene ptoze, čak i u djece mlađe od jedne godine te stečene ptoze sa slabom funkcijom levatora.

Title:

Long-term outcome of silicone tube frontalis sling-Fox technique

Authors:

Miletić Daliborka, Kuzmanović Elabjer Biljana, Bušić Mladen, Knežić Mira, Krtalić Lucija

Institution:

University Eye Clinic, University Hospital "Sveti Duh", Zagreb, Faculty of Medicine Osijek, Faculty of dental medicine and health care Osijek, University Josip Juraj Strossmayer in Osijek Reference center of the Ministry of Health of the Republic of Croatia for pediatric ophthalmology and strabismus

Aim:

to present our surgical technique and the long-term outcome of ptosis correction with silicone tube frontalis sling

Patients and methods:

this is a retrospective study of patients with upper lid ptosis with poor levator function of different etiology that underwent frontalis sling-Fox technique surgery using silicone tube at the University Eye Clinic, University Hospital "Sveti Duh", Zagreb, from 2005 to 2019. Data on age, sex, cause of the ptosis, associated signs such as Marcus Gunn phenomenon, unilateral or bilateral involvement, intraoperative and/or postoperative complications, and recurrence requiring additional surgery were retrieved from the database.

Results:

In total 65 eyelids of 48 patients, 31 with unilateral and 17 with bilateral ptosis, were operated on during the set period. There were 17 females and 31 males, with the mean age of 21.4 ± 26.6 years (range 1 month-76 years, median 5 years).

In 83.3% of patients ptosis was congenital and in 16.7% acquired. The mean follow-up time was 5.5 ± 3.6 years (range 1-15 y, median 4.5 y), with a recurrence rate of 16.9 % (11/65 eyelids). There were no serious corneal complications and a prolapsed silicone knot without inflammation was documented in three patients.

Conclusion:

Frontalis sling is a commonly used procedure indicated for correction of severe ptosis with poor levator muscle function.

In our institution, a silicone tube remained the only material used for frontalis sling surgery since its introduction in 1998.

To the best of our knowledge, this is the longest follow-up of patients with silicone frontalis sling. In our hands, it yielded excellent and stable results as a sole therapy of congenital ptosis, even in children younger than one year and of acquired ptosis with poor levator function.

Kongres / Congresses:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA ORBITU / Orbit section

Titula / Title:

Doc.dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Daliborka

Ime i prezime / First and Last Name:-Last

Miletić

59. Jakšić Boško

Naslov:

Uloga subtenonske injekcije triamcinolona kod refraktornog makularnog edema.

Autori:

Jakšić B, Bašić A, Vučinović A, Znaor Lj

Ustanova:

Klinika za očne bolesti, KBC Split

Cilj:

Ispitati utjecaj subtenonskog triamcinolona uz intravitrealni bevacizumab na smanjenje makularnog edema.

Bolesnici i metode:

U istraživanje je uključen 21 bolesnik s edemom makule (centralna fovealna debljina CFT > 250 μm) kod kojih primjena najmanje 3 intravitrealne injekcije bevacizumaba nije dovela do zadovoljavajućeg poboljšanja makularnog edema. Pet bolesnika je u pozadini imalo dijagnozu senilne makularne degeneracije, tri okluziju centralne retinalne vene, a trinaest dijabetički makularni edem. Bolesnici su bili liječeni tijekom 2019. godine u Klinici za očne bolesti, KBC Split. Kriterij lošeg odgovora na terapiju se definirao ispitivanjem vidne oštine i pretragom optičke koherentne tomografije (OCT), učinjene nakon treće injekcije bevacizumaba. Tada su se bolesnici uputili na aplikaciju anti VEGF terapije bevacizumabom zajedno sa subtenonskom aplikacijom injekcije triamcinolon acetona (Kenalog 0,4 mg/0,1 ml). Kontrolni pregled intraokularnog tlaka napravljen je dan nakon zahvata i prilikom svake sljedeće oftalmološke kontrole koja je osim mjerenja intraokularnog tlaka, podrazumijevala i pregled vidne oštine, OCT makule i pregled očne pozadine, a obavljani su 1 i 3 mjeseca nakon primjene terapije.

Rezultati:

Bolesnici su u prosjeku prije gore navedene kombinacijske terapije primili 8,14 injekcija intravitrealnog bevacizumaba \pm 3,7 (najmanje 3, a najviše 15 injekcija). Vidna oštrina nakon jednog mjeseca od injekcije se poboljšala u 12 bolesnika (57,14%) u odnosu na početnu vidnu oštrinu, dok je nakon 3 mjeseca ostala poboljšana u 10 bolesnika (47,62%). Nakon jednog mjeseca od injekcije došlo je do statistički značajnog poboljšanja prosječne vidne oštine (+0,05), a nakon tri mjeseca vrijednost prosječne vidne oštine nije statistički značajno promijenjena u odnosu na početnu (+0,03). Rezultati su pokazali statistički značajno smanjenje centralne debljine fovee – CFT nakon jednog (-154,96 μm) i nakon 3 mjeseca (-106,57 μm) od injekcije. Nakon jednog mjeseca, u 18 (85,71%) bolesnika je došlo do smanjenja vrijednosti CFT-a, a nakon 3 mjeseca isto se dogodilo u 15 bolesnika (71,42%). Prosječna se vrijednost intraokularnog tlaka povećala za 1 mmHg.

Zaključak:

Utvrđeno je statistički značajno smanjenje makularnog edema nakon subtenonske injekcije triamcinolone acetona u bolesnika koji nisu reagirali na opetovanu monoterapiju intravitrealnim bevacizumabom.

Title:

The role of sub-Tenon triamcinolone acetate injections in the treatment of refractory macular edema.

Authors:

Jakšić B, Bašić A, Vučinović A, Znaor Lj

Institution:

Department of Ophthalmology, University Hospital Centre Split

Aim:

The aim of this study was to determine the influence of sub-Tenon triamcinolone acetate added to intravitreal bevacizumab on reduction of macular edema.

Patients and methods:

The study included 21 patients with macular edema (central foveal thickness CFT > 250 µm) in whom administration of at least 3 intravitreal injections of bevacizumab did not lead to a satisfactory improvement in macular edema. Five patients were diagnosed with senile macular degeneration, three with central retinal vein occlusion, and thirteen with diabetic macular edema. The patients were treated during 2019 at the Department of Ophthalmology, University Hospital Centre Split. The criterion of poor response to therapy was defined by visual acuity examination and optical coherence tomography (OCT) scan, performed after the third injection of bevacizumab. Patients were then referred for administration of anti-VEGF therapy with bevacizumab together with a sub-Tenon injection of triamcinolone acetate (Kenalog 0.4 mg / 0.1 ml). Intraocular pressure screening was performed one day after the procedure and at each subsequent ophthalmic examination, which, in addition to intraocular pressure measurements, included visual acuity, OCT scan of the macula and fundus examination, and were performed 1 and 3 months after injection.

Results:

Patients received an average of 8.14 injections of intravitreal bevacizumab ± 3.7 (a minimum of 3 and a maximum of 15 injections) prior to the above combination injection. Visual acuity after one month of injection improved in 12 patients (57.14%) compared to baseline visual acuity, while after 3 months it remained improved in 10 patients (47.62%). After one month of injection, there was a statistically significant improvement in average visual acuity (+0.05). After three months, the value of average visual acuity did not change significantly from baseline (+0.03). The results showed a statistically significant decrease in central fovea thickness - CFT after one (-154.96 µm) and after 3 months (-106.57 µm) from injection. After one month, the value of CFT decreased in 18 patients (85.71%), and after 3 months the same occurred in 15 patients (71.42%). The average intraocular pressure value increased by 1 mmHg after 3 months.

Conclusion:

A statistically significant decrease in macular edema after sub-Tenon injection of triamcinolone acetate was found in patients who did not respond to repeated monotherapy with intravitreal bevacizumab.

Kongres / Congresses:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU MLADI U OFTALMOLOGIJI / Young Ophthalmologist Section

Titula / Title:

Dr.

Specijalizant / Resident

Ime i prezime / First and Last Name:-First

Boško

Ime i prezime / First and Last Name:-Last

Jakšić

60. Siniša Skelin

Naslov:

Okulokardijalni refleks-naša iskustva

Autori:

Siniša Skelin, Dobrila Karlica Utrobičić, Irena Marković

Ustanova:

KBC Split, Klinika za očne bolesti

Cilj:

Utvrditi pojavnost okulokardijalnog refleksa kod operacije strabizma

Bolesnici i metode:

Ispitano 80 bolesnika u dobi od 5 do 24 godine. Operirano je 40 medijalnih ravnih mišića i 40 lateralnih ravnih mišića.

Rezultati:

Okulokardijalni refleks se javio u 34 od 40 medijalnih i u 22 od 40 lateralnih očnih mišića

Zaključak:

Zbog česte pojavnosti kardiološkog odgovora na manipulaciju vanjskim očnim mišićima treba u vijek s oprezom pristupiti operaciji strabizma.

Title:

Oculocardiac reflex-our experiences

Authors:

Siniša Skelin, Dobrila Karlica Utrobičić, Irena Marković

Institution:

KBC Split, Ophthalmology Clinic

Aim:

To determine the occurrence of oculocardiac reflex in strabismus surgery

Patients and methods:

We examined 80 patients aged 5 to 24 years. 40 medial rectus muscles and 40 lateral rectus muscles were operated on.

Results:

Oculocardiac reflex occurred in 34 of 40 medial and 22 of 40 lateral eye muscles

Conclusion:

Due to the frequent occurrence of a cardiac response to manipulation of the external eye muscles, strabismus surgery should always be approached with caution.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA PEDIJATRIJSKU OFTALMOLOGIJU I STRABIZAM / Pediatric Ophthalmology and Strabismus section

Titula / Title:

Dr.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Siniša

Ime i prezime / First and Last Name:-Last

Skelin

61. Bakula Maja

Naslov:

Kontrolne vrijednosti intraokularnog i intrakranijskog tlaka laboratorijskih kunića

Autori:

Bakula Maja, Jonjić Ivana, Barišić Kutija Marija, Klarica Marijan, Kuzman Tomislav

Ustanova:

Medicinski fakultet Sveučilišta u Zagrebu, Klinički bolnički centar Zagreb, Klinika za očne bolesti

Cilj:

Prikazati kontrolne vrijednosti intraokularnog tlaka (IOP) i intrakranijskog tlaka (ICP) kod eksperimentalnog modela kunića mjerenog različitim metodama, te međusobni odnos navedenih tlakova.

Bolesnici i metode:

Prikazan je pregled kontrolnih vrijednosti intraokularnog tlaka kod laboratorijskih kunića dobivenih različitim mjernim metodama. Opisan je eksperimentalni model razvijen u našem laboratoriju kod kojeg se istovremeno vrši mjerenje IOP i ICP metodom direktne kanulacije prednje očne sobice i lateralne moždane komore. Izvršeno je praćenje kontrolnih vrijednosti oba tlaka u horizontalnom položaju životinje tijekom 90 minuta mjerenja.

Rezultati:

Kontrolne vrijednosti mjerene direktnom kanulacijom prednje očne sobice su $IOP = 11.2 \pm 1.1$ mmHg, a kontrolne vrijednosti ICP = 12.4 ± 0.6 cm H₂O. Tijekom razdoblja od 90 minuta u horizontalnom položaju životinje primjećen je blagi porast IOP-a i blago smanjivanje ICP-a.

Zaključak:

Metoda direktne kanulacije prednje očne sobice i lateralnih moždanih komora se pokazala kao najpreciznija u određivanju kontrolnih vrijednosti IOP i ICP kod eksperimentalnih životinjskih modela.

Title:

The control values of intraocular and intracranial pressure in laboratory rabbits

Authors:

Bakula Maja, Jonjić Ivana, Barišić Kutija Marija, Klarica Marijan, Kuzman Tomislav

Institution:

Medical Faculty University of Zagreb, Clinical Hospital Center Zagreb, Department of Ophthalmology

Aim:

To show control values of intraocular pressure (IOP) and intracranial pressure (ICP) in our experimental model in rabbits measured with different measuring methods, and to show correlation between intraocular and intracranial pressure.

Patients and methods:

This research will show control values of intraocular and intracranial pressure obtained on laboratory rabbits using different measuring methods. We will describe our experimental model in which we simultaneously measured IOP and ICP via direct cannulation of anterior chamber of the eye and lateral cranial chamber. Monitoring of control values of intraocular and intracranial pressure in horizontal position during 90 minutes was made.

Results:

Control values of intraocular pressure measured with direct cannulation of anterior chamber are 11.2 ± 1.1 mmHg, and control values of intracranial pressure with direct cannulation of lateral cranial chamber are 12.4 ± 0.6 cm H₂O.

Measured in horizontal position during 90 minutes, values of intraocular pressure show a slight increase, whereas values of intracranial pressure tend to decrease.

Conclusion:

Direct cannulation of anterior chamber and lateral cranial chambers has been shown as the most precise method for measuring intraocular and intracranial pressure in experimental models on laboratory animals.

Kongres / Congress:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU MLADI U OFTALMOLOGIJI / Young Ophthalmologist Section

Titula / Title:

Dr.

Specijalizant / Resident

Ime i prezime / First and Last Name:-First

Maja

Ime i prezime / First and Last Name:-Last

Bakua

62. Tamara Mišljenović Vučerić

Naslov:

Autosomno recesivna "LHON-like" optička neuropatija

Autori:

Tamara Mišljenović Vučerić¹, Tomislav Vidović², Maja Novak-Stroligo¹, Tea Čaljkusić-Mance¹

Ustanova:

1 Klinički bolnički centar Rijeka, Klinika za oftalmologiju 2 Klinički bolnički centar Zagreb, Klinika za očne bolesti, Referentni centar Ministarstva zdravlja za neurooftalmologiju

Cilj:

Ovo je prikaz prvog slučaja genetski potvrđenog autosomno recesivnog oblika Leberove hereditarne optičke neuropatije (arLHON) uzrokovane mutacijom u DNAJC30 gen, u Hrvatskoj. Leberova hereditarna optička neuropatija (LHON) najčešća je mitohondrijska bolest. To je i prva mitohondrijska bolest genetski definirana točkastom mutacijom u mitohondrijalnoj DNA (mtDNA). LHON se time smatra modelom mitohondrijske bolesti. U više od 90% slučajeva dijagnoza LHON-a se postavlja genetskom analizom 3 tipične mutacije (m.11778G>A u MT-ND4 genu, m.3460G>A u MT-ND1 genu i m.14484T>C u MT-ND6 genu). Razvojem molekularne dijagnostike, Stenton i suradnici prvi su opisali homozigotnu mutaciju nuklearnog gena – DNAJC30, te utvrdili arLHON.

Bolesnici i metode:

Pacijent, 23 godine javlja se radi subakutnog pada vida obostrano sa centralnim skotomima u vidnom polju. Premda je klinička slika ukazivana na LHON, testiranjem tri tipične genetske mutacije nije se dokazao LHON. Pulsna glukokortikoidna terapija na koju nije došlo do poboljšanja vidne oštine i perzistiranje hiperintenzivnog signala vidnih živaca na magnetskoj rezonanci više mjeseci nakon nastupa optičkog neuritisa pobudilo je sumnju na atipičnu formu optičkog neuritisa, te je obrada proširena na sekvencioniranje cjelokupnog egzoma.

Rezultati:

Sekvencioniranjem cjelokupnog egzoma utvrđena je prisutnost homozigotne missense varijante c.152A>G (Tyr51Cys): NM_032317.3 u DNAJC30 genu, utvrđena kao uzrok arLHON.

Zaključak:

Obzirom na novootkrivene patogene varijante odgovorne za arLHON, u slučaju nepotvrđene dijagnoze, a uz kliničku sumnju na LHON uz testiranje cijele mitohondrijalne DNA, treba uključiti i nuklearne gene, sekvencioniranjem cjelokupnog egzoma.

Title:

Autosomal recessive "LHON-like" optic neuropathy

Authors:

Tamara Mišljenović Vučerić¹, Tomislav Vidović², Maja Novak-Stroligo¹, Tea Čaljkusić-Mance¹

Institution:

1 Clinical Hospital Center Rijeka, Department of Ophthalmology 2 University Hospital Center Zagreb, Department of Ophthalmology, Reference center for neuro ophthalmology

Aim:

This is a case report of the first patient genetically confirmed autosomal recessive form of Leber hereditary optic neuropathy (arLHON) caused by a mutation in DNAJC30 gene, in Croatia. Leber's hereditary optic neuropathy (LHON) is the most frequent mitochondrial disease and was the first to be genetically defined by a point mutation in mitochondrial DNA (mtDNA). LHON is thus considered as a model of mitochondrial disease. In more than 90% of cases, the diagnosis of LHON is made by genetic analysis of 3 typical mutations (m.11778G> A in MT-ND4 gene, m.3460G> A in MT-ND1 gene and m.14484T> C in MT-ND6 gene). With the development of molecular diagnostics, Stenton and co-workers described a homozygous mutation in the nuclear gene - DNAJC30 and identified an autosomal recessive form of LHON (arLHON).

Patients and methods:

Male patient, 23 years old, with subacute vision loss on both eyes with central scotomas in the visual field. Although, the clinical picture was indicative for LHON, testing of three typical genetic mutations didn't prove it. Pulsed glucocorticoid therapy that did not improve visual acuity and the persistence of hyperintense optic nerve signal on magnetic resonance imaging for several months after the onset of optic neuritis, raised suspicion of an atypical form of optic neuritis, and treatment was extended to sequencing the whole exome.

Results:

Sequencing of the entire exome revealed the presence of a homozygous missense variant c.152A> G (Tyr51Cys): NM_032317.3 in the DNAJC30 gene, identified as the cause of arLHON.

Conclusion:

Given the newly discovered pathogenic variants responsible for arLHON, in case of unconfirmed diagnosis, and with clinical suspicion of LHON along with testing of whole mitochondrial DNA, nuclear genes should also be included, by sequencing the entire exome.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA NEUROOFTALMOLOGIJU / Neuro-Ophthalmology section

Titula / Title:

Dr.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Tamara

Ime i prezime / First and Last Name:-Last

Mišljenović Vučerić

63. Dobrila Karlica Utrobičić

Naslov:

Što je novo u kirurgiji strabizma?

Autori:

Dobrića Karlica Utrobičić, Žana Ljubić

Ustanova:

KBC Split. Opća bolnica Knin

Cilj:

Prikazati nove tehnike otvaranja spojnice kod operacije strabizma te usporediti ih sa standardnim perilimbalnim pristupom.

Bolesnici i metode:

38 pacijenata kod kojih je planiran operativni zahvat na ravnim mišićima zbog horizontalnog strabizma randomizirano je u 3 skupine: minimalno invazivni zahvat, incizija u obliku broja 7 te klasični perilimbalni pristup. Mjere ishoda bile su: vrijeme trajanja operacije, crvenilo i kemoza spojnice, osjećaj stranog tijela i suženje. Kontrolni pregledi rađeni su prvi, sedmi i trideseti postoperativni dan.

Rezultati:

Nije bilo statistički značajne razlike u vremenu trajanja operacije među skupinama. Crvenilo i kemoza spojnice, osjećaj stranog tijela te suženje bili su statistički značajno manji 1. i 7. postoperativni dan, u skupini kod koje je proveden minimalno invazivni zahvat u odnosu na druge dvije skupine. Trideseti postoperativni dan nije bili značajnije razlike među skupinama.

Zaključak:

Minimalno invazivni pristup operaciji strabizma pokazao se vremenski jednako učinkovit kao i klasični pristup, ali sa statistički značajno manjim nuspojavama te subjektivnim smetnjama.

Title:

What's new in strabismus surgery?

Authors:

Dobrića Karlica Utrobičić, Žana Ljubić

Institution:

Clinic for eye disease, University hospital Split, Hospital Knin

Aim:

To show new techniques in strabismus surgery and compare them with standard perilimbal approach.

Patients and methods:

38 patients with horizontal strabismus that were randomized into 3 groups: minimally invasive procedure, incision in the form of number 7 and classical perilimbal approach. The measures of the outcome were: the duration of the operation, redness and chemosis of the coupling, the feeling of a foreign body and tearing. Check-ups were done on the first, seventh and 30th postoperative days.

Results:

There was no statistically significant difference in the duration of the operation between the groups. Redness and chemosis of the conjunctiva, the feeling of a foreign body and tearing were significantly lower on the 1st and 7th postoperative days in the group where the minimally invasive procedure was performed compared to the other two groups. There was no statistically significant difference on 30th postoperative day between the groups.

Conclusion:

The minimally invasive approach has proven to be as time-effective as the classical approach, but with statistically significantly side effects and subjective complaints.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA PEDIJATRIJSKU OFTALMOLOGIJU I STRABIZAM / Pediatric Ophthalmology and Strabismus section

Titula / Title:

Doc.dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Dobriča

Ime i prezime / First and Last Name:-Last

Karlica Utrobičić

64. Sania Vidas Pauk

Naslov:

Odabir pacijenata za crosslinking rožnice: prva iskustva iz Klinike za očne bolesti KBC-a Zagreb

Autori:

Sania Vidas Pauk, Sonja Jandroković, Dina Lešin Gaćina, Martina Tomić, Nenad Vukojević, Maja Pauk Gulić, Ivan Škegro

Ustanova:

Klinika za očne bolesti, KBC Zagreb, Kišpatićeva 12, Zagreb

Cilj:

Istražiti kliničke i topometrijske parametre u procjeni progresije keratokonusa.

Bolesnici i metode:

U istraživanju je sudjelovalo 30 pacijenata podijeljenih u dvije skupine: pacijenti kojima je, temeljem praćenja i procjene anamnestičkih, kliničkih i tomografskih podataka, učinjen crosslinking rožnice i oni kojima isti zahvat nije učinjen.

Rezultati:

Ovo istraživanje je pokazalo koji su parametri važni za detekciju progresije keratokonusa u naših pacijenata, te definiralo moguće prediktore i indikatore progresije keratokonusa.

Zaključak:

Pravovaljana detekcija progresije keratokonusa kao i procjena moguće progresije bolesti kod pacijenata s rizičnim čimbenicima od velike je važnosti za donošenje odluke o pravovremenom crosslinkingu rožnice kao i izbjegavanju nepotrebnog izlaganja pacijenata zahvatu i njegovim komplikacijama.

Title:

Patient selection for corneal crosslinking: first experience from the Clinical Department of Ophthalmology, Zagreb University Hospital Center

Authors:

Sania Vidas Pauk, Sonja Jandroković, Dina Lešin Gaćina, Martina Tomić, Nenad Vukojević, Maja Pauk Gulić, Ivan Škegro

Institution:

Clinical Department of Ophthalmology, Zagreb University Hospital Center

Aim:

To investigate clinical and topometric parameters in assessing keratoconus progression.

Patients and methods:

The study involved 30 patients, divided into two groups: patients who, based on monitoring and evaluation of anamnestic, clinical, and tomographic data, underwent corneal crosslinking and those who did not undergo the same procedure.

Results:

Defining keratoconus progression is fundamental for clinical decisions in taking keratoconus care. Optimizing patient selection for CXL treatment results in halting keratoconus progression and

d, on the other hand, prevents unnecessary exposure to treatment risks and improves overall effectiveness.

Conclusion:

Defining keratoconus progression is fundamental for clinical decisions in taking keratoconus care. Optimizing patient selection for CXL treatment results in halting keratoconus progression and, on the other hand, prevents unnecessary exposure to treatment risks and improves overall effectiveness.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJA ZA KONTAKTOLOGIJU / Contactology section

Titula / Title:

Dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Sania

Ime i prezime / First and Last Name:-Last

Vidas Pauk

65. Sandra Vokurka Topljak

Naslov:

Epifora u bolesnika sa kroničnim glukomom: kliničke karakteristike

Autori:

Sandra Vokurka Topljak 1 , Jelena Juri Mandić 2

Ustanova:

Odjel za oftalmologiju, OB Bjelovar 1, Odjel za oftalmologiju, KBC Zagreb, Medicinski fakultet Zagreb 2

Cilj:

Prikazati utjecaj topičkih AG pripravaka na periokularno područje i drenažni dio lakrimalnog sustava.

Bolesnici i metode:

Kliničke karakteristike epifore u 48 bolesnika sa kroničnom topičkom AG terapijom pregledanih u okuloplastičnoj ambulanti OB Bjelovar i KBC Zagreb između lipnja 2020 i lipnja 2021. Bolesnici su podijeljeni u skupine prema dužini trajanja AG terapije, morfološkim promjenama drenažnog lakrimalnog sustava i kliničkim simptomima epifore.

Rezultati:

Statistička analiza u tijeku.

Zaključak:

Preliminarni rezultati kao i istraživanje relevantne literature ukazuju na značajan utjecaj kronične AG terapije na morfologiju i funkciju gornjeg i donjeg dijela drenažnog lakrimalnog sustava što u bolesnika sa glaukomom rezultira različitim stadijima epifore i suznog oka.

Title:

Epiphora in patients with chronic glaucoma: clinical characteristics

Authors:

Sandra Vokurka Topljak 1 , Jelena Juri Mandić 2

Institution:

Department of Ophthalmology, General Hospital Bjelovar , Croatia¹ , Department of Ophthalmology, University Hospital Centre Zagreb, Medical School University of Zagreb, Croatia²

Aim:

To show the influence of topical AG preparations on the periocular area and drainage part of lacrimal system.

Patients and methods:

Clinical characteristics of epiphora in 48 chronic glaucoma patients who used topical AG therapy examined in the oculoplastic clinic in General hospital Bjelovar and University Hospital Centre Zagreb between June 2020 and June 2021. Patients were divided into groups according to the duration of AG treatment, morphological changes in the drainage part of lacrimal system and clinical symptoms of the epiphora.

Results:

Statistical analysis still in progress.

Conclusion:

Preliminary results as well as review of relevant literature indicate significant influence of chronic AG therapy on the morphology and function of the upper and lower part of the drainage lacrimal system that results in different stages of epiphora and teary eye in glaucoma patients.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA ORBITU / Orbit section

Titula / Title:

Dr.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Sandra

Ime i prezime / First and Last Name:-Last

Vokurka Topljak

66. Krešimir Mandić

Naslov:

PPV sa PFCL tamponadom kod afakičnog, aniridičnog pacijenta s regmatogenim odignućem mrežnice

Autori:

dr.sc. Krešimir Mandić, Marija Štanfel, Danijela Mrazovac Zimak, Dalibor Opačić, prof. Tomislav Jukić, prof. Nenad Vukojević

Ustanova:

KBC Zagreb, Klinika za očne bolesti

Cilj:

prikazati liječenje pacijenta s rupturom bulbusa

Bolesnici i metode:

pacijent sa rupturom bulbusa, ekstruzijom leće, gubitkom šarenice i naknadnim inferiornim regmatogenim odignućem mrežnice uz proliferativnu vitreoretinopatiju podvrgnut je višestrukom operativnom zahvatu

Rezultati:

pacijent je nakon više kirurških zahvata uspješno zbrinut

Zaključak:

PPV uz PFCL tamponadu i sekundarnu implantaciju IOL jedna je opcija liječenja pacijenta sa afakijom, aniridijom i inferiornim regmatogenim odignućem mrežnice sa proliferativnom vitreoretinopatijom

Title:

PPV with PFCL tamponade and secondary IOL implantation in aphakic, aniridic patient with rhegmatogenous retinal detachment

Authors:

Krešimir Mandić MD, PhD Marija Štanfel MD, Danijela Mrazovac Zimak MD, Dalibor Opačić, MD, prof. Tomislav Jukić MD, PhD, prof. Nenad Vukojević MD, PhD

Institution:

UHC Zagreb

Aim:

show treatment of a patient with ruptured eye globe injury

Patients and methods:

a patient with ruptured globe injury, lens extrusion, iris loss, and subsequent inferior rhegmatogenous retinal detachment with proliferative vitreoretinopathy underwent multiple surgeries

Results:

after several surgeries, the patient had favorable outcome

Conclusion:

PPV with PFCL tamponade and secondary IOL implantation is one of treatment options for patients with aphakia, aniridia, and inferior rhegmatogenous retinal detachment with proliferative vitreoretinopathy

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA MREŽNICU / Retina section

Titula / Title:

Dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Krešimir

Ime i prezime / First and Last Name:-Last

Mandić

67. Krešimir Mandić

Naslov:

Naša iskustva s brolocizumabom kod pacijenata sa vlažnom SMD rezistentnih na terapiju bevacizumabom

Autori:

dr.sc. Krešimir Mandić, Marija Štanfel, Danijela Mrazovac Zimak, Dalibor Opačić, prof. Tomislav Jukić, prof. Nenad Vukojević

Ustanova:

KBC Zagreb, Klinika za očne bolesti

Cilj:

ispitati učinkovitost brolocizumaba kod pacijenata sa vlažnom formom senilne makularne degeneracije rezistentnih na terapiju bevacizumabom

Bolesnici i metode:

Uz pomoć OCT-

a mjerene su vrijednosti središnje subfoveolarne debljine kod 16 pacijenata sa vlažnom formom senilne makularne degeneracije rezistentnih na terapiju bevacizumabom. Mjerenja su vršena na istom oku u 3 navrata. Prilikom prva dva mjerenja OCT skeniranje učinjeno je 4 tjedna nakon aplikacije bevacizumaba, dok je treće mjerenje izvršeno 4 tjedna nakon prve aplikacije brolocizumaba

Rezultati:

brolocizumab u odnosu na bevacizumab značajno bolje smanjuje vrijednost središnje subfoveolarne debljine kod pacijenata sa vlažnom formom senilne makularne degeneracije rezistentnih na terapiju bevacizumabom

Zaključak:

brolocizumab je dobra terapijska opcija za pacijente sa vlažnom formom senilne makularne degeneracije rezistentnih na terapiju bevacizumabom

Title:

Initial Response to Intravitreal Brolocizumab in Patients with Recalcitrant Chronic Wet Age-Related Macular

Authors:

Krešimir Mandić MD, PhD Marija Štanfel MD, Danijela Mrazovac Zimak MD, Dalibor Opačić, MD, prof. Tomislav Jukić MD, PhD, prof. Nenad Vukojević MD, PhD

Institution:

UHC Zagreb

Aim:

to evaluate the efficacy of brolocizumab in patients with the wet age related macular degeneration (AMD) resistant to bevacizumab therapy

Patients and methods:

The value of central subfoveal thickness was measured with the help of OCT in 16 patients with the wet AMD resistant to bevacizumab therapy. Measurements were performed on the same eye 3 times. In the first two measurements, the OCT scan was performed 4 weeks after the administration of bevacizumab, while the third measurement was performed 4 weeks after the first administration of brolocizumab.

Results:

compared to bevacizumab, brolocizumab significantly better reduced central subfoveal thickness in patients with a wet AMD resistant to bevacizumab therapy.

Conclusion:

brolocizumab is a good therapeutic option for patients with a wet AMD resistant to bevacizumab therapy

Kongres / Congress:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA MREŽNICU / Retina section

Titula / Title:

Dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Krešimir

Ime i prezime / First and Last Name:-Last

Mandić

68. Josip Knežević

Naslov:

Na križanju reumatologije, neurooftalmologije i okuloplastike-
dijagnoza s kojom ne smijete kasniti

Autori:

Josip Knežević, Jelena Juri Mandić, Tomislav Vidović, Goran Šukara

Ustanova:

Klinika za očne bolesti, Klinika za unutrašnje bolesti-
reumatologija Medicinskog fakulteta Sveučilišta u Zagrebu, KBC Zagreb

Cilj:

predstaviti rezultate GiACTA studije kao i rezultate ekstenzije objavljenje u Lancet/ Rheumatology 2021 uz prikaz bolesnika sa gigantocelularnim arteritisom (GCA) refrakternog na standardnu sistemsku glukokortikoidnu terapiju (GCT).

Bolesnici i metode:

prikaz slučaja -

bolesnik u dobi od 71 god. javlja se sa karakterističnim kranijalnim i ekstrakranijalnim simptomima GCA . Nakon započete sistemske GCT zbog izostanka očekivanog odgovora uvodi se biološka terapija tocilizumabom.

Rezultati:

nakon uvođenja alternativne terapije kod bolesnika dolazi do značajnog kliničkog poboljšanja stanja te se postigne dugotrajna remisija bolesti

Zaključak:

smjernice British Society of Rheumatology (BSR-

a) o liječenju GCA objavljenje 2010 u časopisu Rheumatology , još uvijek predstavljaju standard dijagnostike i liječenja GCA u Europi. Međutim, posljednjih godina u kliničkoj praksi i literaturi , bilježi se porast broja bolesnika refrakternih na standardnu mono terapiju GCT. Rezultati Gi ACTA studije, kao i ekstenzija o djelovanju tocilizumaba , monoklonskog antitijela koje blokira IL-6 aktivaciju pokazali su da se njime postiže dugotrajna remisija bolesti te izostanak neželjenih nuspojava i komplikacija uzrokovanih dugotrajnom GCT ,te da je učinkovit u liječenju refrakternih slučajeva GCA.

Title:

At the crossroads of rheumatology, neuroophthalmology and oculo-plasty-
a diagnosis you should not miss!

Authors:

Josip Knežević, Jelena Juri Mandić, Tomislav Vidović, Goran Šukara

Institution:

Department of ophthalmology, Department for internal diseases-
Rheumatology, School of Medicine, University of Zagreb, University Hospital Center Zagreb

Aim:

to present the results of the GiACTA study as well as the results of the extension published in the Lancet / Rheumatology 2021 with a case report of a patient with giant cell arteritis (GCA) refractory to standard systemic glucocorticoid therapy (GCT).

Patients and methods:

case report - patient aged 71 years, with characteristic cranial and extracranial GCA symptoms. After initiation of systemic GCT due to the absence of the expected response, biologic therapy with tocilizumab is introduced.

Results:

after the introduction of alternative therapy, significant clinical improvement occurred and long-term remission of the disease is achieved

Conclusion:

The guidelines of the British Society of Rheumatology (BSR) on the treatment of GCA published in 2010 in the journal Rheumatology, still represent the standard of diagnosis and treatment of GCA in Europe. However, in recent years in clinical practice and literature, there has been an increase in the number of patients refractory to standard GCT monotherapy. The results of the GiACTA study, as well as the extension study, proved that tocilizumab, a monoclonal antibody that blocks IL-6 activation can achieve long-term remission of the disease, have steroid sparing effect and was effective in treating refractory GCA.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA ORBITU / Orbit section

Titula / Title:

Doc.dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Josip

Ime i prezime / First and Last Name:-Last

Knežević

69. Belak Marin

Naslov:

Razvoj nove tehnike skleralne fiksacije Akreos AO60 IOL na 4 točke sa Gore-Tex šavima kroz kornealni rez od 2,75 mm and 2,2 mm

Autori:

Belak M., Krolo I., Vatavuk Z.

Ustanova:

KBC "Sestre milosrdnice"

Cilj:

Predstaviti novu tehniku skleralne fiksacije Akreos AO60 IOL na 4 točke sa Gore-Tex šavima kroz kornealni rez od 2,75 mm and 2,2 mm i naša prva iskustva s ovom tehnikom..

Bolesnici i metode:

Opisat ćemo našu novu tehniku skleralne fiksacije na 4 točke i prve rezultate na 4 bolesnika bez adekvatne kapsularne potpore.

Rezultati:

Predstaviti ćemo rane rezultate praćenja 4 bolesnika kojima je učinjena ova tehnika. Svi pacijenti su operirani od strane jednog kirurga (prvi autor BM). Vidna oštrina se poboljšala kod svih bolesnika.

Bolesnik broj 2 je imao prethodnu tupu traumu oka sa posljedičnom posttraumatskom midrijazom, subluksiranom kataraktom, intravitrealnim krvarenjem i ablacijom retine zbog kojih je učinjen PPV s instilacijom silikonskog ulja. Nakon druge operacije (ICCE) koju je učinio drugi kirurg, pacijent je bio afakičan sa ostatkom silikonskog ulja u prostoru staklovine i u cijelosti prilježnom retinom. S obzirom na prethodnu ablaciju retine postoperativna vidna oštrina je blago poboljšana. Ostala tri pacijenta uz korekciju postižu vidnu oštrinu od 1,0 prema Snellenovom optotipu. Prva dva pacijenta nisu imala komplikacija u ranom postoperativnom periodu (3 mj.). Kod bolesnika 3 i 4 na prvoj kontroli 7 postoperativnog dana uočene su povišene vrijednosti IOT što je kasnije dobro kontrolirano topikalnom antiglaukomsom terapijom. IOL je dobro centrirana kod svih bolesnika i nije uočen "tilt" na biomikroskopu tijekom perioda praćenja. Druge komplikacije također nisu uočene u ranom postoperativnom periodu.

Zaključak:

Ova tehnika donosi mnoga poboljšanja u odnosu na prethodno poznatu tehniku skleralne fiksacije na 4 točke sa Gore-Tex šavima.

Prvo, manji kornealni rez ne zahtjeva šivanje te time smanjuje vrijeme operacije i kirurški inducira astigmatizam (SIA), također pridonosi stabilnosti prednje očne sobice tijekom operacije. Drugo, smanjuje se mogućnost zapetljavanja konca u POS nakon implantacije. Treće, sa kreiranjem skleralnih tunela konac i čvor se umetnu intraskleralno i time se potpuno izbjegava mogućnost erodiranja konca kroz spojnicu, a time i posljedične mogućnosti infekcije i potrebe za uklanjanjem IOL.

Tehnika se može koristiti uz PPV ili kao odvojeni postupak sekundarne ugradnje IOL. Moguće je primijeniti temporalni ili superiorni pristup glavnog reza.

Vjerujemo da ova tehnika rješava većinu glavnih nedostataka prethodno opisane tehnike.

Title:

Development of novel technique for 4-point scleral fixation with preloaded Akreos AO60 intraocular lens and Gore-Tex sutures through 2,75 mm and 2,2 mm incision

Authors:

Belak M., Krolo I., Vatavuk Z.

Institution:

UHC "Sestre milosrdnice"

Aim:

To report a novel surgical technique for 4-point scleral fixation with preloaded IOL (Akreos AO60, Bausch&Lomb) together with Gore-Tex suture CV-8 (USP 7-0) suture in C and D cartridge (Monarch III system, Alcon Laboratories, Inc.) through 2.2 mm and 2.75 mm clear corneal incision and our first experiences with the technique.

Patients and methods:

We will present in details a novel technique of scleral fixation of IOL with Gore-Tex sutures through small clear corneal incision used in 4 patients.

Results:

We will present our early results on 4 patients.

All patients have been operated by a single surgeon (first author).

Visual acuity improved in all patients. Patient number 2 had previous blunt eye trauma with posttraumatic mydriasis, subluxated cataract, intravitreal hemorrhage and retinal detachment (RD). After second surgery (ICCE), done by another surgeon, patient was left aphakic with silicone oil inside vitreous space, and retina completely attached. Postoperative visual acuity of this patient was low because of previous RD. First two patients had no postoperative complication during follow up period. Only patient number 3 and 4 had postoperative complication of IOP rise. The IOP was well controlled with topical antiglaucoma medication. The IOLs were in good centration postoperatively and IOL tilt was not observed on slit lamp examination during follow up. No other complications were seen after 3 months of follow up.

Conclusion:

The value of this technique is manifold. First, smaller main incision does not require suturing and reduces surgical induced astigmatism (SIA), it also increases anterior chamber stability during surgery. Secondly, it reduces the possibility of intraocular tangling of sutures. Thirdly, with formation of scleral tunnels sutures and knots are buried intrascleral and thus the possibility of suture conjunctival erosion is eliminated. Procedure can also be done as a part of standard pars plana vitrectomy for dislocated IOL or dislocated crystalline lens remnants without adequate capsular support or as a separate procedure. Temporal or superior main incision is possible.

We believe that our technique resolves majority of drawbacks from previously reported technique.

Kongres / Congresses:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA KATARAKTU I REFRAKTIVNU KIRURGIJU / Cataract and Refractive surgery section

Titula / Title:

Dr.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Marin

Ime i prezime / First and Last Name:-Last

Belak

70. Šimić Tin

Naslov:

AION i više od toga

Autori:

T. Šimić, A. Srdoč, T. Mišljenović Vučerić

Ustanova:

Klinika za oftalmologiju, Klinički bolnički centar Rijeka

Cilj:

Tromboza cerebralnih venskih sinusa može biti životno ugrožavajuće stanje, a s obzirom na relativno rjeđu pojavnost, dijagnoza predstavlja izazov. Nakon glavobolje, najčešća je upravo oftalmološka simptomatologija. Između ostalih riziko faktora moguća je i nasljedna trombofilija u sklopu polimorfizma MTHFR i PAI gena.

Bolesnici i metode:

Kroz prikaz slučaja 57-

godišnje pacijentice ukazali smo na postojanje atipične forme prednje nearteritične ishemijske optikoneuropatije.

Rezultati:

Pacijentici je postavljena dijagnoza nearteritične ishemijske optikoneuropatije lijevog oka, a dvije godine kasnije razvija se edem optičkog diska desnog oka. Učinjenom MR venografijom dokazano se parcijalna tromboza desnog transverzalnog sinusa, a molekularnom analizom MTHFR i PAI gena otkriva se da je pacijentica heterozigot za mutaciju enzima MTHFR 1298C te PAI-1 4G/5G.

Zaključak:

Postoje dokazi da je mutacija MTHFR i PAI gena povezana s trombozom venskih sinusa. Ovim prikazom slučaja želimo ukazati na važnost proširene dijagnostičke obrade u slučajevima atipičnih formi prednje ishemijske optikoneuropatije.

Title:

AION and beyond

Authors:

T. Šimić, A. Srdoč, T. Mišljenović Vučerić

Institution:

Department of Ophthalmology, University Hospital Rijeka

Aim:

Cerebral sinus venous thrombosis can be a life-threatening condition and considering the relatively rare occurrence, the diagnosis presents a challenge. One of the most common symptoms, except headache, are ocular symptoms. Among other risk factors, hereditary thrombophilia within polymorphism MTHFR and PAI gene is also possible.

Patients and methods:

Based on case report of a 57 years old patient we showed there are different forms of non-arteritic anterior ischemic optic neuropathy.

Results:

The patient was diagnosed with non-arteritic ischemic optic neuropathy of the left eye, and two years later, optic disc edema developed on the right eye. MR venography showed the partial thrombosis of the right transverse sinus and molecular analysis of MTHFR and PAI gene revealed that the patient was heterozygous for the MTHFR 1298C and PAI-1 4G/5G enzyme mutation.

Conclusion:

There is evidence that MTHFR and PAI gene mutation are connected with cerebral sinus venous thrombosis. By this case report we want to point out the importance of the extended diagnostic processing in cases of atypical forms of anterior ischemic optic neuropathy.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU MLADI U OFTALMOLOGIJI / Young Ophthalmologist Section

Titula / Title:

Dr.

Specijalizant / Resident

Ime i prezime / First and Last Name:-First

Tin

Ime i prezime / First and Last Name:-Last

Šimić

71. Tatjana Topalović

Naslov:

„Poppers“ makulopatija

Autori:

Tatjana Topalović, Vlatka Brzović Šarić, Benedict Rak, Edita Kondža Krstonijević

Ustanova:

Klinika za očne bolesti, Klinička bolnica „Sveti Duh“, Zagreb, Medicinski fakultet Osijek, Fakultet za dentalnu medicinu i zdravstvo Osijek, Sveučilišta J.J. Strossmayera u Osijeku, Referentni centar Ministarstva zdravstva za dječju oftalmologiju i strabizam

Cilj:

prikazati simptome, kliničke i morfološke promjene u makularnom području uslijed inhaliranja „poppers“ droge

Bolesnici i metode:

19- godišnja pacijentica primjećuje mutniji vid centralno na oba oka, nakon što je dan ranije inhalirala „poppers“ sprej. Inače je zdrava, ne uzima nikakvu terapiju. Negira ranije tegobe s vidom. Pri dolasku učini se kompletan oftalmološki pregled. Vidna oštrina na oba oka bila je bez korekcije 0.5, a nalaz prednjeg segmenta obostrano je bio uredan. Pregledom očne pozadine uočavaju se mikrocistične promjene u centralnom području makule na oba oka. Ostali nalaz očne pozadine bio je uredan. Učini se multimodalna dijagnostika: OCT makule, OCT PNO, OCT angiografija, FAF, FAG, mikroperimetrija, te elektrofiziološka ispitivanja (EOG, ERG, mfERG). Na temelju anamneze, kliničke slike i učinjene dijagnostičke obrade postavi se dijagnoza toksične makulopatije uslijed inhaliranja „poppers“ droge te se odlučuje za daljnje praćenje bez terapije.

Rezultati:

Na kontrolnom pregledu nakon 7 dana pacijentica je subjektivno bila bez smetnji vida, s vidnom oštrinom 1.0 na oba oka. Nakon mjesec i pol dana vidna je oštrina obostrano bila 1.0, a nalaz očne pozadine bio je u potpunosti uredan. Kontrolni OCT PNO, OCT makule te kontrolna mikroperimetrija bili su također urednih vrijednosti.

Zaključak:

„Poppers“ je inhalacijska droga iz skupine alkilnih nitrita koja dovodi do vazodilatacije, relaksacije mišića, analgezije i euforije. Simptomi poppers makulopatije mogu se javiti odmah nakon inhaliranja droge ili nakon nekoliko sati ili dana. Sama patogeneza makulopatije nije poznata. Pacijenti uglavnom navode obostrani pad vidne oštine, centralne skotome, „glare“ i sl. Očna pozadina može biti sasvim urednog izgleda ili se mogu vidjeti žučkaste sitne promjene foveolarno. S obzirom na mali broj opisanih slučajeva, nema jasnih preporuka o terapiji. Kod nekih pacijenata dolazi do spontane regresije simptoma i promjena na fundusu, dok kod nekih zaostaju trajne posljedice.

Zaključno, s obzirom na sve rašireniju primjenu ove skupine droga, potrebno je kod ovakve kliničke slike postaviti i ciljane anamnestička pitanja koja će diferencijalno dijagnostički pomoći u razlučivanju etiologije makulopatije, te na taj način ciljano dovesti do točne dijagnoze.

Title:

Poppers Maculopathy

Authors:

Tatjana Topalović, Vlatka Brzović Šarić, Benedict Rak, Edita Kondža Krstonijević

Institution:

University Eye Clinic, University Hospital "Sveti Duh", Zagreb, Faculty of Medicine Osijek, Faculty of dental medicine and health care Osijek, University Josip Juraj Strossmayer in Osijek, Reference center of the Ministry of Health of the Republic of Croatia for pediatric ophthalmology and strabismus

Aim:

to describe symptoms, findings and morphologic changes of a toxic, poppers maculopathy

Patients and methods:

19- year old patient presented with bilateral blurred central vision after inhaling poppers spray the day before. She had no other significant medical or ocular history. On examination, her visual acuity was 0.5 in both eyes. Slit-lamp examination revealed normal anterior segment, but parafoveal microcystic lesions were seen at both maculae. Multimodal imaging was performed: OCT, OCT PNO, OCT angiography, fundus autofluorescence, fluorescein angiography, microperimetry and electrophysiology tests (EOG, ERG, mfERG). Based on medical history of inhaling poppers spray, clinical and imaging findings, toxic, poppers maculopathy was confirmed and we decided to follow-up without any treatment.

Results:

At 7 days follow up, patient was asymptomatic and her visual acuity was 1.0. At 1.5- month follow-up, she was completely asymptomatic, her visual acuity was 1.0 and fundus examination was normal. OCT, OCT PNO and microperimetry were also normal.

Conclusion:

"Poppers" are a group of alkyl nitrites used as party drugs which lead to vasodilatation, muscle relaxation, analgesia and euphoria. Symptoms can occur immediately or within hours or days after drug abuse. Pathogenesis of maculopathy is still unclear. Symptoms include mostly bilateral visual acuity loss, central scotoma, glare etc. The fundoscopy may be unremarkable or show small yellowish lesions at the fovea. There are no treatment recommendations. Some cases may resolve spontaneously, but some can have long-term consequences.

In conclusion, since "poppers" abuse is increasing and is still underreported, ophthalmologists should be aware of the possible retinal toxicity of "poppers" and should ask a detailed medical history whenever similar clinical case is seen. That will assist clinicians in the diagnosis and management of such patients.

Kongres / Congress:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU MLADI U OFTALMOLOGIJI / Young Ophthalmologist Section

Titula / Title:

Dr.

Specijalizant / Resident

Ime i prezime / First and Last Name:-First

Tatjana

Ime i prezime / First and Last Name:-Last

Topalović

72. Kuzmanović Elabjer Biljana

Naslov:

Modificirani Mustardé switch flap

Autori:

Kuzmanović Elabjer Biljana, Bušić Mladen, Miletić Daliborka, Pleše Andrej, Bjeloš Mirjana

Ustanova:

Klinika za očne bolesti, Klinička bolnica „Sveti Duh“, Zagreb, Medicinski fakultet Osijek, Fakultet za dentalnu medicinu i zdravstvo Osijek, Sveučilišta J.J. Strossmayera u Osijeku Referentni centar Ministarstva zdravstva za dječju oftalmologiju i strabizam

Cilj:

Predstaviti našu modifikaciju "Mustardé switch flap"- a u kirurgiji vjeđa

Bolesnici i metode:

Predstavljeni su rezultati rekonstrukcije s uklanjanjem zloćudnog tumora gorne vjeđe 3 pacijenta a kod kojih smo odabrali rekonstrukciju s "Mustardé switch flap"-om uz dodatne modifikacije.

Rezultati:

Rekonstrukcija velikog defekta nakon uklanjanja masivnog malignog tumora gornje vjeđe i dalje je izazov u okuloplastičnoj kirurgiji. Naš način odabira rekonstrukcije je "Mustardé switch flap". Zbog nedostatka Mohsove korekcije s mikropresatkom i čekanja od dva tjedna na histopatološke rezultate, napravili smo izmjene koje su nam omogućile ponovnu izrezivanje tkiva vjeđe u slučaju pozitivnih rubova isječka: širina pedikula režnja bila je 7 mm dopuštajući duljinu režnja koja se po potrebi može povećati, vjeđe su zatvorene privremenom lateralnom tarzorafijom radi zaštite oka, a donja vjeđa je potpuno rekonstruirana u drugoj fazi postupka.

Zaključak:

U tri bolesnika sa zloćudnim tumorima gornje vjeđe ova metoda rekonstrukcije pokazala se sigurnom i učinkovitom uz povoljne dugoročne rezultate. Oko je zatvoreno i zaštićeno, a vjeđe, kako nisu primarno rekonstruirane, tako se kasnije u sekundarnoj rekonstrukciji mogu, ukoliko je potrebno, dodatno korigirati.

Title:

Modified Mustardé switch flap

Authors:

Kuzmanović Elabjer Biljana, Bušić Mladen, Miletić Daliborka, Pleše Andrej, Bjeloš Mirjana

Institution:

University Eye Clinic, University Hospital "Sveti Duh", Zagreb, Faculty of Medicine Osijek, Faculty of dental medicine and health care Osijek, University Josip Juraj Strossmayer in Osijek Reference center of the Ministry of Health of the Republic of Croatia for pediatric ophthalmology and strabismus

Aim:

Presentation of our modification of the "Mustardé switch flap" in eyelid surgery

Patients and methods:

The results of reconstruction with the removal of a malignant tumor of the upper eyelid of 3 patients in whom we chose reconstruction with "Mustardé switch flap" with additional modifications were presented.

Results:

Reconstruction of a large defect after the removal of a massive malignant upper lid tumor is still a challenge in oculoplastic surgery. Our method of choice is "Mustardé switch flap". Due to the lack of Mohs micrographic surgery and waiting time of two weeks for histopathological results, we made modifications enabling us to re-excise in case of positive margins.

Conclusion:

In three patients with malignant tumor of the upper eyelid, this method of reconstruction proved to be safe and effective with favorable long-term results. The eye is closed and protected, and the eyelids, as they are not primarily reconstructed, can be corrected later in the secondary reconstruction if necessary.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA ORBITU / Orbit section

Titula / Title:

Dr.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Andrej

Ime i prezime / First and Last Name:-Last

Pleše

73. Dina Lešin Gaćina

Naslov:

Utjecaj COVID-19 pandemije na adherenciju bolesnika s glaukomom

Autori:

Dina Lešin Gaćina, Sonja Jandroković, Ivan Škegro, Sania Vidas Pauk, Martina Tomić

Ustanova:

Klinika za očne bolesti, Klinički bolnički centar Zagreb

Cilj:

Pandemija COVID-

19 uzrokovala je poteškoće u liječenju bolesnika s različitim kroničnim bolestima. Niska adhirencija među bolesnicima s glaukomom je od ranije prepoznata kao čest i ozbiljan problem. Do sada su opisane mnogobrojne prepreke adherenciji u liječenju glaukoma, međutim sada su prepoznate i nove barijere koje su specifične za razdoblje pandemije. Cilj ove studije bio je procijeniti adherenciju i povezane čimbenike među bolesnicima s glaukomom tijekom pandemije COVID-19.

Bolesnici i metode:

Provedeno je presječno istraživanje među bolesnicima s primarnim glaukomom otvorenog kuta na Klinici za očne bolesti, KBC-

a Zagreb, u razdoblju od 1. travnja 2020. do 1. travnja 2021. godine. Ispitani su osnovni socio-demografski i klinički podaci. Adherencija je procijenjena pomoću validiranog i pouzdanog upitnika za samoprocjenu (Čuligova skala). Za svakog pacijenta određena je razina glaukorskog oštećenja, s obzirom na stupanj strukturalnog i funkcionalnog oštećenja lošijeg oka. Funkcionalno oštećenje je procijenjeno pomoću vrijednosti MD-

a (engl. mean defect) na vidnom polju koristeći statičku automatsku perimetriju. Nalaz prosječne vrijednosti debljine sloja živčanih vlakana retine (engl. RNFL) dobiven pomoću optičke koherentne tomografije je korišten za kvantifikaciju strukturalnog defekta. Potom je učinjena statistička analiza podataka, a P vrijednost manja od 0,005 se smatrala statistički signifikantnom.

Rezultati:

Studija je uključila 113 bolesnika s primarnim glaukomom otvorenog kuta (48 muškaraca / 65 žena), srednje dobi 65.89 ± 8.53 godina. Prema Čuligovoj skali adherencije, samo 45 (39.8%) bolesnika je bilo adherentno prema lokalnom glaukomskom liječenju tijekom COVID-19 pandemije. Određen je stupanj oštećenja vida za svakog pacijenta. Median debljine sloja živčanih vlakana retine lošijeg oka bio je 97 (min 52, max 122) μm , dok je median MD-a lošijeg oka bio 2.9 (min -1.3, max 23.9) dB.

Zaključak:

Zaključno, tijekom COVID-

19 pandemije zabilježeno je neadherentno ponašanje prema lokalnoj terapiji među bolesnicima s glaukomom. Razmatranja se trebaju usmjeriti na strategije s ciljem povećanja adherencije, osobito edukacije pacijenata, s ciljem postizanja pozitivnih terapijskih ishoda.

Title:

The impact of COVID-19 pandemic on medication adherence in patients with glaucoma

Authors:

Dina Lešin Gaćina, Sonja Jandroković, Ivan Škegro, Sania Vidas Pauk, Martina Tomić

Institution:

Department of Ophthalmology, Zagreb University Hospital Center

Aim:

The COVID-

19 pandemic has caused difficulties in continuous treatment among patients with various chronic diseases. Patient nonadherence to glaucoma treatment has been already known frequent and serious issue. Previously, multiple obstacles to treatment adherence with anti-glaucomatous therapy were identified, however, currently, the barriers that are unique for ongoing period have been also recognized. This study aimed to evaluate the adherence to glaucoma treatment and associated factors during the COVID-19 pandemic.

Patients and methods:

The cross-sectional study was conducted among primary open-angle glaucoma patients at the Department of Ophthalmology, University Hospital Centre Zagreb. The data collection period was from 1st April 2020 to 1st April 2021. The main socio-demographic and clinical data were assessed. The adherence to treatment was assessed through a valid and reliable self-administered questionnaire, the Culig Adherence Scale (CAS). For each patient, the glaucoma damage was determined from the level of structural and functional impairment of the worse eye. The extent of functional impairment was assessed by mean defect (MD) values on the visual field findings using automated static perimetry. Optical coherence tomography was used to quantify the structural defects, by the average retinal nerve fiber layer (RNFL) thickness. Statistical analyses were performed, a P value of less than 0.05 was considered statistically significant.

Results:

This study included 113 primary open-angle glaucoma patients (48 males / 65 females), with a mean age of 65.89 ± 8.53 years. According to the Culig Adherence Scale, only 45 (39.8%) patients were adherent to local glaucoma treatment during COVID-19 pandemic. Visual impairment of the worse eye was determined for each patient. The median of peripapillary RNFL thickness of the worse eye was 97 (min 52, max 122) μm , while the median of MD of the worse eye was 2.9 (min -1.3, max 23.9) dB.

Conclusion:

In conclusion, nonadherence to treatment was prevalent among patients with glaucoma during the COVID-19 pandemic. Special consideration should be given to the strategies targeting the adherence to treatment in order to achieve positive therapeutic outcomes.

Kongres / Congresses:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA GLAUKOM / Glaucoma section

Titula / Title:

Dr.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Dina

Ime i prezime / First and Last Name:-Last

Lešin Gaćina

74. Petric Vicković Ivanka

Naslov:

Transplantacija uzgojenih autolognih limbalnih stanica (CLET) u liječenju kombustije

Autori:

Petric Vicković Ivanka, Lacmanović Lončar Valentina, Iveković Renata, Zekušić Marija, Jularić Ana marija, Doleneć Tamara, Skokio Marija, Vataćuk Zoran

Ustanova:

KBC Sestre milosrdnice, Zagreb

Cilj:

prikaz rezultata nakon transplantacije uzgojenih autolognih limbalnih stanica kod bolesnika s unilateralnom kombustijom oka

Bolesnici i metode:

Prikaz kliničkih podataka 6 bolesnika s CLET-om i kombustijom oka. Postoperativno bolesnici su praćeni prvi postoperativni dan, tjedan dana nakon operacije, 3 i 6 mjeseci postoperativno te nakon godinu dana.

Rezultati:

Kod svih bolesnika zabilježeno je poboljšanje u slijedećim parametrima: konjunktivalizacija, vaskularizacija, zamućenje roćnice te prisutnost simblefarona

Zaključak:

CLET je učinkovita metoda u regeneraciji epitela roćnice kod bolesnika s deficijencijom limbalnih stanica

Title:

Cultivated limbal epithelial transplantation (CLET) for unilateral chronic ocular burns

Authors:

Petric Vicković Ivanka, Lacmanović Lončar Valentina, Iveković Renata, Zekušić Marija, Jularić Ana marija, Doleneć Tamara, Skokio Marija, Vataćuk Zoran

Institution:

Universty hospital Sestre milosrdnice

Aim:

To report first clinical outcome of cultivated limbal epithelial transplantation (CLET) in eyes with unilateral limbal stem cell deficiency (LSCD)

Patients and methods:

Clinical records of 6 patients who had CLET due to unilateral chronic ocular burns were reviewed. Postoperatively patients were seen on the first day, at 1 week, 3 and 6 months, and at 1 year postoperatively.

Results:

At final follow-up all patients showed an improvement in conjunctivalization, grade of vascularisation and corneal opacity and grade of symblepharon.

Conclusion:

CLET is effective in inducing regeneration of a healthy corneal epithelium in patients with LSCD

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA KATARAKTU I REFRAKTIVNU KIRURGIJU / Cataract and Refractive surgery section

Titula / Title:

Prof.dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Ivanka

Ime i prezime / First and Last Name:-Last

Petric Vicković

75. Kalauz Miro

Naslov:

Add-On IOL u korekciji refrakcijskih grešaka pseudofaknih bolesnika

Autori:

Kalauz M, Masnec S, Kuzman T, Škegro I, Vidas S

Ustanova:

KBC Zagreb

Cilj:

.

Bolesnici i metode:

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Rezultati:

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Zaključak:

Add-

On IOL su leće za piggyback implantaciju u sulcus pseudofaknih bolesnika. Te intraokularne leće kompenziraju ostatnu sferičnu i cilindričnu refrakcijsku grešku ili korigiraju presbiopiju kod bolesnika s monofokalnim IOL.

Title:

Refractive and Visual Outcomes After Implantation of a Secondary Add On Sulcus Intraocular Lenses

Authors:

Kalauz M, Masnec S, Kuzman T, Škegro I, Vidas S

Institution:

KBC Zagreb

Aim:

.

Patients and methods:

.

Results:

.

Conclusion:

The Add-On IOL is a line of sulcus-fixated lenses designed for piggyback implantation in pseudophakic patients. When implanted, these IOLs compensate for residual spherical and astigmatic refractive errors or correct presbyopia in patients with monofocal IOLs.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA KATARAKTU I REFRAKTIVNU KIRURGIJU / Cataract and Refractive surgery section

Titula / Title:

Prof.dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Miro

Ime i prezime / First and Last Name:-Last

Kalauz

76. Dunja Bajtl

Naslov:

Analiza krvnih žila makularnog područja optičkom koherentnom tomografskom angiografijom u zdrave četverogodišnje djece

Autori:

Dunja Bajtl, dr.med 1, prof.dr.sc. Mirjana Bjeloš, dr.med 2,3,4, prof.dr.sc. Mladen Bušić, prim.dr. med 2,3,4 Leon Marković, dr.med 3,4 Ana Ćurić, dr.med 3,4 prof.dr.sc. Biljana Kuzmanović Elabjer, prim.dr.med 2,3,4, prof.dr.sc. Josip Barać, dr.med 1,2

Ustanova:

1Klinika za očne bolesti, Klinički bolnički centar Osijek, Osijek 2, Medicinski fakultet, Sveučilište Josipa Jurja Strossmayera, Osijek 3, Klinika za očne bolesti, Klinička bolnica "Sveti Duh", Zagreb, 4 Fakultet dentalne medicine i zdravstva Osijek, Sveučilište Josipa Jurja Strossmayera, Osijek

Cilj:

Cilj ovog presječnog istraživanja koje je uključilo zdravu četverogodišnju emetropnu djecu je izraditi normativnu bazu odrednica makularne perfuzije mjerenih optičkom koherentnom tomografskom angiografijom (OCTA).

Bolesnici i metode:

Jedno oko svakog ispitanika mjereno je OCTA. Sljedeći parametri analizirani su korištenjem AngioTool ImageJ softwarea: područje krvnih žila (VA), područje krvnih žila unutar eksplantiranog područja (VD), ukupan broj grananja (TNJ), broj grananja u jedinici površine (JD), ukupna duljina krvnih žila izražena Euklideanskom udaljenosti unutar eksplantiranog područja (TVL), srednja duljina svih krvnih žila unutar eksplantiranog područja (AVL), broj vaskularnih segmenata otvorenih krajeva (TNEP), lakunarnost (L), indeks promjera krvnih žila (VDI), tortuozitet (T) i površina fovealne avaskularne zone (FAZ). Također je izmjerena središnja debljina makule (CMT) i središnji volumen makule (CMV).

Rezultati:

Izmjereni su parametri na 62 oka 62 djeteta prosječne dobi $50,4 \pm 3,8$ mjeseca. VA, VD i T rastu od unutarnjih prema vanjskim slojevima mrežnice. Intermedijarni kapilarni pleksus imao je najviše i JD i TNEP te najmanji FAZ. Spolna diferencijacija mrežnice manifestira se višim vrijednostima VA, VDI i TNEP te korioretinalnoj VA, VDI i L u muške djece. Koriokapilaris je imao najviše vrijednosti VD, AVL i T, a najniže L i TNEP.

Zaključak:

Ovo istraživanje stvorilo je prvu normativnu bazu podataka makularne vaskularne mreže u najmlađoj ujednačenoj skupini emetropne četverogodišnje djece.

Title:

Macular perfusion normative data acquired with optical coherence tomography angiography in healthy four-year-old children

Authors:

Dunja Bajtl, MD 1, Mirjana Bjeloš, MD, PhD 2,3,4, Mladen Bušić, MD, PhD 2,3,4, Leon Marković, MD 3,4, Ana Ćurić, MD 3,4, Biljana Kuzmanović Elabjer, MD, PhD 2,3,4, Josip Barać, MD, PhD 1,2

Institution:

1 University Eye Department, University Hospital Centre Osijek, Osijek, Croatia, 2 Faculty of Medicine, Josip Juraj Strossmayer University of Osijek, Osijek, Croatia, 3 University Eye Department, University Hospital "Sveti Duh", Zagreb, Croatia, 4 Faculty of Dental Medicine and Health Osijek, Josip Juraj Strossmayer University of Osijek, Osijek, Croatia

Aim:

The purpose of this cross-sectional study involving healthy emmetropic four-year-old Caucasian children was to provide a macular perfusion normative database acquired with optical coherence tomography angiography (OCTA).

Patients and methods:

One eye of each examinee underwent OCTA imaging. The following parameters were analyzed using AngioTool Image J software: vessels area (VA), vessels density (VD), total number of junctions (TNJ), junctions density (JD), total vessel length (TVL), average vessel length (AVL), total number of endpoints (TNEP), lacunarity (L), vessel diameter index (VDI), tortuosity (T) and foveal avascular zone area (FAZ). Average central macular thickness (CMT) and average central macular volume (CMV) were measured.

Results:

62 eyes of 62 children of average age 50.4 ± 3.8 months were examined. VA, VD, and T increased from the inner towards the outer layers of the retina. The intermediate capillary plexus had the highest JD and TNEP and narrowest FAZ. Retinal sexual differentiation was supported with higher values of the retinal VA, VDI and TNEP, and chorioretinal VA, VDI and L in males. The choriocapillaris presented with the highest VD, AVL, and T and the lowest L and TNEP.

Conclusion:

The study provides the first detailed normative database of the macular vascular network in the youngest uniform cohort of emmetropic four-year-old children.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA PEDIJATRIJSKU OFTALMOLOGIJU I STRABIZAM / Pediatric Ophthalmology and Strabismus section

Titula / Title:

Dr.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Dunja

Ime i prezime / First and Last Name:-Last

Bajtl

77. Batistić Darko

Naslov:

Transskleralni Z šav za fiksaciju intraokularne leće

Autori:

Batistic D., Bucan K., Znaor Lj, Sinicic A.

Ustanova:

Klinički bolnički centar Split

Cilj:

Evaluirati skleralnu fiksaciju IOL-e transskleralnim šavom kao metodom fiksacije IOL-e u oku bez kapsularne potpore

Bolesnici i metode:

Pet afaknih očiju bez kapsularne potpore i dva oka sa subluksiranom trodijelnom IOL-om zaprimljena su radi fiksacije IOL i liječeni su ovom tehnikom. Korištena su dva troakara na pars plana, jedan za infuzijsku tekućinu i drugi za vitrektom. Nakon duboke prednje vitrektomije i prolaska 10-

0 polipropilena na udaljenosti od 1,3 mm od limbusa, provedena je tehnika implantacije leće po moću injektora kroz kornealni rez od 2,7 mm. Za osiguravanje IOL korišteni su intraskleralni šavovi koji su transkleralno u 5 cik cak poteza provedeni kroz skleru. Na kraju je konac odrezan bez ikakvih čvorova. U slučaju potonule trodijelne leće rađena je PPV na četiri 23 G otvora sa fiksacijom iste intraokularne leće.

Rezultati:

Nisu primijećeni znakovi erozije šavova, labavljenje šavova, skleralna atrofija ili kronična upala. U svim slučajevima implantati su bili i ostali glatko smješteni u cilijarnom sulku i pokazali su stabilan i centriran položaj bez nagiba leće.

Zaključak:

Ova tehnika skleralne fiksacije trodijelne IOL-a u očima bez kapsularnog oslonca fiksira IOL brzo i učinkovito i osigurava brzu vizualnu rehabilitaciju. U slučaju afakije može se učiniti na aparatu za kirurgiju katarakte (Infinity, Centurion).

Title:

Transscleral Z suture for IOL fixation

Authors:

Batistic D., Bucan K., Znaor Lj., Sinicic A.

Institution:

Clinical Hospital Centre Split

Aim:

To evaluate transscleral suturing of IOL as a method of IOL fixation in eyes without capsular support

Patients and methods:

Five aphakic eyes without capsular support and two eyes with subluxated IOLs were administered for IOL fixation and were treated with these procedure. Two temporal pars plana troacars one for infusion fluid and another for vitrector were used. After deep anterior vitrectomy and passing of 10-0 polypropylenen at distance of 1.3 mm from the limbus injector technique through a small self sealing tunnell incision was performed. Intrasccleral 5 zigzag pasess of 10-0 polypropylen were used to secure the IOL. The suture was then cut without any knot. In a case of luxated 3 piece IOL 4 port 23GPPV was performed with fixation of the same IOL.

Results:

No evidence of suture erosion, suture loosening, scleral atrophy or chronic inflammation were observed in any of these patients . In all cases, the implants were smoothly positioned in the ciliary sulcus and showed a stable and centered position without any tilt or torque.

Conclusion:

This technique of 3 piece IOL fixation in eyes without capsular support fixates IOLs quickly and efficiently and assures fast visual rehabilitation. In a case of aphakia it can be done on cataract (Infinity, Centurion) machine.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA MREŽNICU / Retina section

Titula / Title:

Dr.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Darko

Ime i prezime / First and Last Name:-Last

Batistić

78. Bušić Mladen

Naslov:

Femtosecond laser kod operacije komplicirane katarakte

Autori:

Bušić M, Kuzmanović Elabjer B, Bosnar D, Miletić D, Pleše A, Cigić V

Ustanova:

Klinika za očne bolesti Kliničke bolnice "Sveti Duh", Zagreb

Cilj:

U radu se prikazuje uporaba femtosecond lasera kod komplicirane katarakte na Klinici za očne bolesti Kliničke bolnice "Sveti Duh", indikacijsko područje i detaljan prikaz tijeka operacije

Bolesnici i metode:

/

Rezultati:

/

Zaključak:

/

Title:

Femtosecond laser in complicated cataract surgery

Authors:

Bušić M, Kuzmanović Elabjer B, Bosnar D, Miletić D, Pleše A, Cigić V

Institution:

University Eye Clinic, University Hospital "Sveti Duh"

Aim:

The paper presents the use of femtosecond lasers in complicated cataracts at the University Eye Clinic of the University Hospital "Sveti Duh", with indications and a detailed presentation of the course of the operation.

Patients and methods:

/

Results:

/

Conclusion:

/

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA KATARAKTU I REFRAKTIVNU KIRURGIJU / Cataract and Refractive surgery section

Titula / Title:

Prof.dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Biljana Kuzmanović Elabjer

79. Martina Tomić

Naslov:

IDF projekt - Uloga mobilne fundus kamere i umjetne inteligencije u probiru dijabetičke retinopatije

Autori:

Martina Tomić, Đurđica Hendelja, Romano Vrabec, Tomislav Bulum, Spomenka Ljubić, Dario Rahelić

Ustanova:

Sveučilišna klinika za dijabetes, endokrinologiju i bolesti metabolizma Vuk Vrhovac, Klinička bolnica Merkur, Zagreb

Cilj:

Procijeniti ulogu mobilne fundus kamere i automatiziranog softvera na bazi umjetne inteligencije (AI) u probiru dijabetičke retinopatije (DR) i utvrditi njihovu dijagnostičku točnost u otkrivanju DR-a u usporedbi s kliničkim pregledom i standardnom fundus kamerom.

Bolesnici i metode:

Ovo presječno validacijsko istraživanje, kao dio projekta Međunarodne dijabetes federacije (IDF), obuhvatilo je 160 bolesnika (320 očiju) sa šećernom bolešću tipa 2 (T2DM) koji su bili na rutinskom oftalmološkom pregledu u Sveučilišnoj klinici Vuk Vrhovac u Zagrebu. Nakon standardnog pregleda fundusa na biomikroskopu, svakom je bolesniku prvo izvršeno slikanje očne pozadine dvaju polja oba oka standardnom 45° fundus kamerom VISUCAM Zeiss, a zatim mobilnom fundus kamerom TANG (Shanghai Zhi Tang Health Technology Co, Ltd.). Dva retinologa su neovisno ocjenjivala fotografije snimljene standardnom kamerom, dok su fotografije snimljene mobilnom kamerom ocjenjivane pomoću provjerenog AI softvera za probir DR-a (DeepDR) i neovisnog oftalmologa IDF-a. Podaci su analizirani pomoću softverskih paketa Statistica 13.5 i SPSS 23.

Rezultati:

Područje ispod roc krivulje (AUC) procjene DR-a mobilnom fundus kamerom iznosilo je 0,883 u usporedbi s kliničkim pregledom i 0,921 u usporedbi sa standardnom kamerom. Osjetljivost i specifičnost otkrivanja DR-a mobilnom fundus kamerom iznosili su 89,1% (95% CI 81,4-94,4) i 100% (95% CI 93,9-100,0) u odnosu na klinički pregled, a 83,2% (95% CI 74,4-89,9) i 100% (95% CI 93,9-100,0) u usporedbi sa standardnom kamerom. Sve tri metode probira bile su jednako precizne i pouzdane u otkrivanju teškog NPDR-a i PDR-a. U otkrivanju blagog NPDR-a (rijetke pojedinačne mikroaneurizme), najtočnija metoda bila je slikanje očne pozadine standardnom 45° fundus kamerom.

Zaključak:

Slikanje očne pozadine mobilnom fundus kamerom učinkovita je metoda probira i otkrivanja DR-a.

a s visokom osjetljivošću i specifičnošću te se značajno podudara s kliničkim pregledom i slikanjem standardnom fundus kamerom.

Title:

IDF project - The role of mobile fundus camera and artificial intelligence in diabetic retinopathy screening

Authors:

Martina Tomić, Đurđica Hendelja, Romano Vrabec, Tomislav Bulum, Spomenka Ljubić, Dario Rahelić

Institution:

Vuk Vrhovac University Clinic for Diabetes, Endocrinology and Metabolic Diseases, Merkur University Hospital, Zagreb

Aim:

To assess the role of mobile fundus camera and artificial intelligence (AI)-based automated software in diabetic retinopathy (DR) screening and determine their diagnostic accuracy in detecting DR compared with clinical examination and a standard fundus camera.

Patients and methods:

This cross-sectional instrument validation study, as a part of the International Diabetes Federation (IDF) project, included 160 patients (320 eyes) with type 2 diabetes (T2DM) who underwent a routine ophthalmological examination in the Vuk Vrhovac University Clinic in Zagreb. After the standard binocular indirect slit-lamp ophthalmoscopy, each patient firstly underwent fundus photography of two fields of both eyes with a standard 45° fundus camera VISUCAM Zeiss and then with a mobile fundus camera TANG (Shanghai Zhi Tang Health Technology Co, Ltd.). Two retina specialists independently graded the photographs taken by the standard camera, while the photographs taken by the mobile camera were graded using a validated AI DR screening software (DeepDR) and an independent IDF ophthalmologist. Data were analyzed using software packages Statistica 13.5 and SPSS 23.

Results:

The area under the roc curve (AUC) of mobile fundus camera assessment of DR was 0.883 compared to the clinical examination and 0.921 compared to the standard camera. The sensitivity and specificity for detecting DR by mobile fundus camera was 89.1% (95%CI 81.4-94.4) and 100% (95%CI 93.9-100.0) compared to clinical examination, while 83.2% (95%CI 74.4-89.9) and 100% (95%CI 93.9-100.0) compared to standard camera. All three screening methods were equally accurate and reliable in detecting severe NPDR and PDR. In detecting mild NPDR (rare single microaneurysms), the most accurate method was photography with a standard 45 ° fundus camera

Conclusion:

Fundus photography using a mobile fundus camera is effective for screening and detecting of DR with high sensitivity and specificity and has a substantial agreement with clinical examination and standard fundus photography.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA MREŽNICU / Retina section

Titula / Title:

Dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Martina

Ime i prezime / First and Last Name:-Last

Tomić

80. Martina Tomić

Naslov:

Visoka prevalencija dijabetičke retinopatije koja ugrožava vid na prvom pregledu očne pozadine u uzorku bolesnika sa šećernom bolešću tipa 2

Autori:

Martina Tomić, Đurđica Hendelja, Romano Vrabec, Tomislav Bulum, Spomenka Ljubić, Dario Rahelić

Ustanova:

Sveučilišna klinika za dijabetes, endokrinologiju i bolesti metabolizma Vuk Vrhovac, Klinička bolnica Merkur, Zagreb

Cilj:

Cilj istraživanja bio je utvrditi učestalost pregleda očne pozadine i razinu kontrole sistemskih čimbenika rizika u uzorku bolesnika sa šećernom bolešću tipa 2 (T2DM) kako bi se procijenila kvaliteta prevencije dijabetičke retinopatije (DR) u Hrvatskoj.

Bolesnici i metode:

Ovo presječno istraživanje obuhvatilo je 160 T2DM koji su bili na potpunom dijabetološkom i oftalmološkom pregledu u Sveučilišnoj klinici Vuk Vrhovac u razdoblju između 15. prosinca 2019. i 15. ožujka 2020. Prikupljeni su i analizirani medicinski podaci, demografski, klinički i laboratorijski parametri.

Rezultati:

Medijan HbA1c-

a je iznosio 7,1%, krvnog tlaka 135/80 mmHg, a srednje vrijednosti svih lipida u krvi bile su unutar referentnog raspona. Prevalencija DR-

a bila je 46,3%. 31,3% svih bolesnika redovito je provodilo pregled očne pozadine, jednom godišnje, 30% ga je provodilo neredovito, uglavnom svakih 3 do 5 godina, a u 38,7% bolesnika ovo je bio prvi pregled očne pozadine. S posebnim naglaskom, kod 60% bolesnika s DR-om koji ugrožava vid ovo je bio prvi pregled očne pozadine.

Zaključak:

Kontrola sistemskih rizičnih čimbenika u ovom uzorku T2DM bila je dobra, ali samo je trećina bolesnika redovito provodila pregled očne pozadine, jednom godišnje. Ovi rezultati ukazuju na potrebu uvođenja sustavnog probira DR-a u rutinsku skrb o šećernoj bolesti u Hrvatskoj.

Title:

High prevalence of vision-threatening diabetic retinopathy at the first fundus examination in a sample of well-controlled type 2 diabetic patients

Authors:

Martina Tomić, Đurđica Hendelja, Romano Vrabec, Tomislav Bulum, Spomenka Ljubić, Dario Rahelić

Institution:

Vuk Vrhovac University Clinic for Diabetes, Endocrinology and Metabolic Diseases, Merkur University Hospital, Zagreb

Aim:

This study aimed to evaluate the frequency of fundus examination, and the level of systemic risk factors control in a sample of type 2 diabetic patients (T2DM) so as to determine the quality of diabetic retinopathy (DR) prevention in Croatia.

Patients and methods:

This cross-sectional study included 160 T2DM who underwent complete diabetological and ophthalmological examinations in Vuk Vrhovac University Clinic between 15th December 2019 and 15th March 2020. Medical records, demographic, clinical and laboratory parameters were collected and analysed.

Results:

The median HbA1c was 7.1%, blood pressure 135/80 mmHg, and the median values of all blood lipids were within the reference range. The prevalence of DR was 46.3%. 31.3% of all patients underwent a fundus examination regularly, once a year, 30% underwent it irregularly, mainly every 3 to 5 years, and in 38.7% of patients, this was the first fundus examination. With particular emphasis, in 60% of patients with vision-threatening DR, this was the first fundus examination.

Conclusion:

The systemic risk factors control in this sample of T2DM was good, but only one-third of patients underwent fundus examinations regularly, once a year. These findings point to the need for introducing a systematic screening for DR into routine diabetes care in Croatia.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA MREŽNICU / Retina section

Titula / Title:

Dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Martina

Ime i prezime / First and Last Name:-Last

Tomić

81. Tomislav Vidović

Naslov:

Klinička obilježja bolesnika s akutnim optičkim neuritisom.

Autori:

Tomislav Vidović, Igor Petriček, Josip Knežević, Tamara Mišljenović Vučerić, Ana Kuzman, Jelena Metikoš, Branimir Cerovski.

Ustanova:

Klinika za očne bolesti Medicinskog fakulteta Sveučilišta u Zagrebu, KBC Zagreb

Cilj:

Cilj je prikazati kliničke osobitosti 30 bolesnika s akutnim optičkim neuritisom koji su liječeni pulsnom steroidnom terapijom.

Bolesnici i metode:

U istraživanje je uključeno 32 bolesnika s akutnim optičkim neuritisom koji su podijeljeni u dvije skupine. U prvoj skupini se nalazi 22 ispitanika s tipičnim akutnim optičkim neuritisom, dok se u drugoj skupini nalaze 10 ispitanika s atipičnim optičkim neuritisom. Svim ispitanicima je osim standardnog oftalmološkog pregleda učinjena Octopus 900 perimetrija, test kontrastne osjetljivosti i test raspoznavanja boja, OCT makule i vidnog živca i VEP prije uvođenja terapije, te 6 mjeseci po prestanku terapije. Također je učinjen i MR mozga, orbita i po potrebi MR vratne kralježnice, te laboratorijska i serološka opservacija.

Rezultati:

Vidna oštrina je načešće bila reducirana u rasponu od 0.7 – 0.1 prema Snellenu u obje skupine. U skupini s tipičnim optičkim neuritisom svi ispitanici su imali periokularnu bol, oštećenje vidne oštrine, relativni aferentni pupilarni defekt, poremećaj raspoznavanja boja i reduciranu kontrast u osjetljivost. Najčešći oblici oštećenja vidnog polja su bili cekocentralni skotom i difuzna depresija. Ispitanici skupine s atipičnim oblikom većinom su imali bezbolno oštećenje vida i edem optičkog diska. Najčešći ispadi vidnog polja su bili cekocentralni skotom, altitudinalni defekt i difuzna depresija. U velikog postotka ispitanika je nađen oporavak vidne funkcije, ali je oporavak bio bolji u skupini s tipičnim oblikom optičkog neuritisa.

Zaključak:

Tipični akutni optički neuritis je češći oblik koji se manifestira tipičnom kliničkom slikom. S obzirom da je povezan s multiplom sklerozom, zove se i demijelinizirajući optički neuritis. Atipični optički neuritis ima različitu kliničku sliku i uglavnom nije povezan s demijelinizirajućim bolestima. S toga zahtjeva drukčiji pristup i drukčiju strategiju.

Title:

Clinical features of patients with acute optic neuritis

Authors:

Tomislav Vidović, Igor Petriček, Josip Knežević, Tamara Mišljenović Vučerić, Ana Kuzman, Jelena Metikoš, Branimir Cerovski.

Institution:

Department of Ophthalmology, School of Medicine, University of Zagreb

Aim:

The aim is to show the clinical features of 30 patients with acute optic neuritis who were treated with pulse steroid therapy.

Patients and methods:

The study included 32 patients with acute optic neuritis who were divided into two groups. The first group is consist of 22 patient with typical acute optic neuritis, while the other group consist of 10 subjects with atypical optic neuritis. In addition to the standard ophthalmological examination, all subjects underwent Octopus 900 perimetry, contrast sensitivity test and color vision testing, OCT and VEP before the introduction of therapy, and 6 months after cessation of therapy. MRI of the brain, orbit and, if necessary, MRI of the cervical spine, as well as laboratory and serological analysis were also done.

Results:

Visual acuity was usually reduced in the range of 0.7 - 0.1 according to Snellen in both groups. In the group with typical optic neuritis, all patients had periocular pain, visual acuity impairment, relative afferent pupillary defect, color vision deficiency and reduced contrast sensitivity. The most common forms of visual field defects were cecocentral scotoma and diffuse depression. Patients in the group with atypical form mostly had painless visual impairment and optic disc edema. The most common visual field defects were cecocentral scotoma, altitudinal defect and diffuse depression. Recovery of visual function was found in a large percentage of subjects, but recovery was better in the group with the typical form of optic neuritis.

Conclusion:

Typical acute optic neuritis is a more common form that has a typical clinical manifestation. Since it is commonly associated with multiple sclerosis, it is also called demyelinating optic neuritis. On the other hand, atypical optic neuritis has a different clinical features and mostly is not associated with demyelinating diseases. Therefore, it requires a different approach and a different strategy.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA NEUROOFTALMOLOGIJU / Neuro-Ophthalmology section

Titula / Title:

Doc.dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Tomislav

Ime i prezime / First and Last Name:-Last

Vidović

82. Ana Ćurić

Naslov:

Trebamo li planirati fakoemulzifikaciju ranije?

Autori:

Ana Ćurić, Mirjana Bjeloš, Mladen Bušić, Biljana Kuzmanović Elabjer, Benedict Rak, Nenad Vuković

Ustanova:

Klinička bolnica "Sveti Duh", Zagreb

Cilj:

Istražiti promjene prokrvljenosti makule nakon nekomplikirane fakoemulzifikacije uporabom OCT-angiografije (OCT-A)

Bolesnici i metode:

OCT-

A je snimljena prije, 1 tjedan, 1 mjesec i 3 mjeseca nakon nekomplikirane fakoemulzifikacije. Slike s indeksom kvalitete (Q) ≥ 30 , izračunate integriranim softverom, kvantitativno su analizirane pomoću AngioTool 0.6 softvera. Eksplantirano područje (EA), područje krvnih žila (VA), postotna površina krvnih žila (VPA), ukupan broj čvorišta (TNJ), gustoća čvorišta (JD), ukupna duljina krvnih žila (TVL), prosječna duljina krvnih žila (AVL), ukupan broj krajnjih točaka (TNEP) i lakunarnost (ML) analizirani su u površinskom vaskularnom kompleksu (SVC), vaskularnom pleksusu sloja živčanih vlakana (NFLVP), površinskom vaskularnom pleksusu (SVP), dubokom vaskularnom kompleksu (DVC), intermedijarnom kapilarnom pleksusu (ICP) i dubokom kapilarnom pleksusu (DCP), kao i velikim koroidalnim krvnim žilama i koriokapilarisu (CC). Usporedba vrijednosti prije i poslije operacije učinjena je pomoću neparametrijskog Friedman ANOVA testa. Razina značajnosti p ostavljena je na $P < 0.05$.

Rezultati:

Statistički značajne promjene vaskularnih parametara na 55 očiju u 55 bolesnika uglavnom su dosegle plato 1 tjedan nakon operacije i ostale stabilne do 3 mjeseca nakon operacije, javljajući se u svim slojevima mrežnice, ali ne i u žilnici i koriokapilarisu. Pronađen je značajan porast VA, VPA, TNJ, JD, TVL i AVL, praćen smanjenjem TNEP i ML, što pokazuje porast opskrbe krvlju makule nakon fakoemulzifikacije. Najveći porast VPA (22.79%), TVL (16.71%), AVL (166.71%) i JD (29.49%) bio je u SVC. Suprotno tome, najveća promjena ML (- 53.41%) pojavila se u DVC.

Zaključak:

Istraživanje je otkrilo da je nekomplikirana fakoemulzifikacija značajno povećala prokrvljenost makule. Ove perfuzijske promjene najvjerojatnije su posljedica funkcionalne hiperemije, a ne upalnog procesa, jer je učinak ostao stabilan do 3 mjeseca, a prosječni Q prije i nakon fakoemulzifikacije nije pokazao statistički značajne promjene. Pretpostavljamo da se učinak izaziva pojačano m stimulacijom mrežnice svjetlošću nakon uklanjanja mrežnice. Dakle, uz poboljšanje vidne oštrine

e, fakoemulzifikacija u starijoj populaciji mogla bi imati i dodatnu korist. Ovaj blagotvoran događaj mogao bi olakšati postupak donošenja odluka s obzirom na ranije vrijeme uklanjanja mrežne u zdravih bolesnika.

Title:

Should We Schedule the Phacoemulsification Earlier?

Authors:

Ana Ćurić, Mirjana Bjeloš, Mladen Bušić, Biljana Kuzmanović Elabjer, Benedict Rak, Nenad Vuković

Institution:

University hospital "Sveti Duh", Zagreb

Aim:

To investigate the changes of macular perfusion after uncomplicated phacoemulsification using OCT-angiography (OCT-A)

Patients and methods:

OCT-

A was performed before, 1 week, 1 month, and 3 months after surgery. Images with quality index (Q) ≥ 30 , as computed by integrated software, were further quantitatively analysed with AngioTool 0.6 software (National Institute of Health, National Cancer Institute, Bethesda, USA). Explanatory area (EA), vessels area (VA), vessels percentage area (VPA), total number of junctions (TNJ), junctions density (JD), total vessels length (TVL), average vessels length (AVL), total number of end points (TNEP), and mean lacunarity (ML) were analysed throughout superficial vascular complex (SVC), nerve fiber layer vascular plexus (NFLVP) superficial vascular plexus (SVP), deep vascular complex (DVC), intermediate capillary plexus (ICP) and deep capillary plexus (DCP), as well as choroidal blood vessels and choriocapillaris (CC). A comparison of pre- and post-operative values was made using non-parametric Friedman ANOVA test. The significance level was set to $P < 0.05$.

Results:

Statistically significant changes in vascular parameters in 55 eyes of 55 patients generally reached plateau 1 week after surgery and remained stable until 3 months after surgery, occurring in all layers of the retina but not in the choroid and choriocapillaris. A significant increase in VA, VPA, TNJ, JD, TVL, and AVL was found, followed by a decrease in TNEP and ML, indicating an increase in macular blood supply after phacoemulsification. The largest increase in VPA (22.79%), TVL (16.71%), AVL (166.71%) and JD (29.49%) was in SVC. In contrast, the largest change in ML (-53.41%) occurred in DVC.

Conclusion:

The study found that uncomplicated phacoemulsification significantly improved macular blood flow. These perfusion changes were most likely due to functional hyperemia rather than the inflammatory process, as the effect remained stable for up to 3 months and the mean Q before and after phacoemulsification showed no statistically significant changes. We hypothesize that the effect is elicited by enhanced retinal stimulation with light after cataract removal. Thus, in addition to improving visual acuity, phacoemulsification in the elderly population could have additional benefits. This beneficial event could facilitate the decision-making process given the earlier timing of cataract removal in healthy patients.

Kongres / Congresses:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU MLADI U OFTALMOLOGIJI / Young Ophthalmologist Section

Titula / Title:

Dr.

Specijalizant / Resident

Ime i prezime / First and Last Name:-First

Ana

Ime i prezime / First and Last Name:-Last

Ćurić

83. Tomislav Kuzman

Naslov:

Povezanost debljine donorske rožnične lamele s vidnom oštrinom nakon stražnje lamelarne transplantacije rožnice

Autori:

Tomislav Kuzman, Ana Meter, Miro Kalauz, Ivan Škegro, Sanja Masnec, Ivana Jonjić

Ustanova:

KBC Zagreb, Klinika za očne bolesti Medicinskog fakulteta u Zagrebu

Cilj:

Transplantacija rožnice je operativni zahvat kojim se bolesnikova zamućena rožnica zamjenjuje bistrom donorskom rožnicom. Razvojem transplantacijske kirurgije rožnice danas je moguće transplantirati unutarnji ili vanjski sloj rožnice. Kod stražnje slojevite transplantacije rožnice (DSAEK - prema engl. Descemet Stripping Automated Endothelial Keratoplasty) transplantira se endotel, Descemetova membrana i tanki dio strome. U literaturi postoje kontradiktorni podaci kako debljina donorske lamele utječe na vidnu oštrinu. Tako neka istraživanja tvrde da se bolja vidna oštrina postiže s tanjim lamelama dok druga ne pokazuju tu korelaciju.

Bolesnici i metode:

U prospektivno istraživanje smo uključili 55 očiju bolesnika prosječne dobi $70,9 \pm 9,4$ godina, koji ima je učinjena konvencionalna DSAEK transplantacija rožnice i koji nemaju ostale komorbiditete koji bi mogli utjecati na vidnu oštrinu. Prikupljeni su epidemiološki podaci, debljina lamele prije operacije mjerena u očnoj banci, vidna oštrina prije operacije te debljina lamele i vidna oštrina 6 mjeseci nakon operacije, mjerena prednjom koherentnom očnom tomografijom (prema engl. Anterior Ocular Coherent Tomography).

Rezultati:

Rezultati pokazuju da je vidna oštrina prije operacije iznosila prosječno 0,15 dok je nakon operacije iznosila prosječno 0,57. Prosječna postoperativna debljina lamele je iznosila $142,16 \mu\text{m}$. Pronađena je korelacija između debljine lamele i vidne oštrine te su bolju vidnu oštrinu 0,63 imali ispitanici čija je debljina lamele bila ispod $124 \mu\text{m}$, dok su statistički značajno lošiju vidnu oštrinu 0,51 postigli ispitanici čije su lamele bile deblje od $124 \mu\text{m}$. Šest mjeseci nakon operacije debljina lamele se deturgescencijom prosječno smanjila za 12% od početne debljine.

Zaključak:

Uzimajući u obzir rezultate našega istraživanja zaključujemo kako kod konvencionalnog DSAEK-a treba težiti transplantiranju donorskih lamela koje će nakon razdoblja deturgescencije u oku biti tanje od $124 \mu\text{m}$, jer će se na taj način postići bolja postoperativna vidna oštrina. Prilikom naručivanja tkiva iz očne banke treba uzeti u obzir i 12% stanjivanje debljine lamele zbog deturgescencije, te sukladno tome tražiti pripremu lamela tanjih od $142 \mu\text{m}$. Na taj način bismo minimaliz

irali gubitak tkiva za očnu banku, imali bi manje problema prilikom operativnog zahvata, dok bi završna oštrina vida kod transplantiranih bolesnika bila zadovoljavajuća.

Title:

Correlation of lamellar donor graft thickness with visual acuity after posterior lamellar keratoplasty

Authors:

Tomislav Kuzman, Ana Meter, Miro Kalauz, Ivan Škegro, Sanja Masnec, Ivana Jonjić

Institution:

University Hospital Center Zagreb, Department of Ophthalmology

Aim:

Descemet's Stripping Automated Endothelial Keratoplasty (DSAEK) is corneal transplantation procedure where the patient's inner dysfunctional layer is replaced. There are contradictory data in the literature about the correlation between lamellar thickness and the visual acuity.

Patients and methods:

Study included 55 eyes after conventional DSAEK and no other comorbidities that could affect visual acuity. Data about lamellar thickness and visual acuity were measured before and 6 months after surgery.

Results:

The results show that visual acuity before surgery was 0,15 on average and after surgery 0,57. Average postoperative lamella thickness was 142,16 μm . Better visual acuity of 0,63 was achieved with lamellas thinner than 124 μm , while statistically significantly lower visual acuity was 0,51 for lamellas thicker than 124 μm . Postoperative deturgescence of lamellas 6 months after surgery was 12% from initial thickness.

Conclusion:

The goal after conventional DSAEK is to have postoperative lamellas thinner than 124 μm in the eye, as this will result in better postoperative visual acuity. In order to achieve this requirement, the request for the eye bank should be lamellas thinner than 142 μm before the surgery. This will minimize tissue loss for eye banks and the surgeons will have fewer problems during surgery, while obtaining good final visual acuity.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA KATARAKTU I REFRAKTIVNU KIRURGIJU / Cataract and Refractive surgery section

Titula / Title:

Prof.dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Tomislav

Ime i prezime / First and Last Name:-Last

Kuzman

84. Marko Lukić

Naslov:

Paraneoplastična zamučena viteliformna submakulopatija kod primarnog vitreoretinalnog limfoma

Autori:

Dr Marko Lukic, FEBO Mr Mark Westcott, FRCOphth

Ustanova:

Moorfields Eye Hospital NHS Trust

Cilj:

Prezentirati rijetku kliničku sliku koja prethodi klasičnoj slici primarnog vitreoretinalnog limfoma

Bolesnici i metode:

Prikaz slučaja gdje je pacijent pregledan od strane interdisciplinarnog tima oftalmologa. Pacijent je prošao kroz klasičnu obradu za uveitis te je imao magnet mozga.

Rezultati:

Muški pacijent prezentira se sa akutnim padom vida na lijevom oku u Moorfields Eye Hospital u siječnju 2020 godine. Pacijent je primjetio žutu mrlju u centralnom vidu lijevog oka koji je bio 6/60 dok je na desnom oku vid bio 6/9 prilikom prezentacije.

Prilikom pregleda očni tlakovi su bili u granicama normale te nije bilo prisutno znakova intraokularne upale. Optička koherentna tomografija je pokazala prisustvo plakoidno subretinalno makularno zadebljanje na lijevom oku. Invazivne angiografske metode (FFA i ICG) nisu prikazale značajne lezije dok ICG je potvrdio odsustvo koroidalnih lezija. Laboratorijski nalazi su bili u granicama normale osim blagog pada limfocita. Pacijent je poslan u Onkološku službu na dodatnu obradu. U međuvremenu, pacijent započinje terapiju sa 40 mg oralnog prednisolona te se vid popravlja na 6/9 na lijevom oku. Unatoč popravljanju vida na lijevom oku, novi depoziti se počinju stvarati na desnom oku.

Zaključak:

Paraneoplastična zamučena viteliformna submakulopatija, forma retinalnog limfoma, može prethoditi klasičnoj kliničkoj slici primarnog vitreoretinalnog limfoma ili primarnog limfoma centralno živčanog sustava te može regredirati spontano, ostavljajući promjene na vanjskim slojevima retine.

Title:

Paraneoplastic Cloudy Vitelliform Submaculopathy in Primary Vitreoretinal Lymphoma

Authors:

Dr Marko Lukic, FEBO Mr Mark Westcott, FRCOphth

Institution:

Moorfields Eye Hospital NHS Trust

Aim:

To present a rare clinical presentation of clinical findings preceding primary vitreoretinal lymphoma

Patients and methods:

It is a single case report. The patient was reviewed by a interdisciplinary ophthalmic team. The patient went through a classic uveitis workup including MRI of the brain.

Results:

A male patient attended Medical Retina clinic in January this year presenting with fairly acute drop in vision on the left eye. Patient has been noticing a yellow spot in his central vision and he presented with visual acuity of 6/60 on affected eye and with good vision on the right eye (6/9). Intraocular pressures were within normal limits and patient had no clinical signs of intraocular inflammation. Optical coherence tomography images revealed presence of placoid/nodular subretinal macular thickening on the left eye. Invasive angiographic imaging modalities (FFA and ICG) were of no significance and ICG ruled out presence of choroidal lesions. Blood work-up was unremarkable despite slight decrease in lymphocytes. Patient was referred to Oncology Service for second opinion where further systemic investigations were requested. In the meantime, patient started with 40 mg of oral Prednisolone and the left eye vision has been improving to 6/9 on Snellen chart. The subretinal deposits started to resolve on the left eye, however, they started to appear on the right eye.

Conclusion:

Paraneoplastic cloudy vitelliform submaculopathy, a form of lymphoma-associated retinopathy, can precede the diagnosis of primary vitreoretinal lymphoma or primary central nervous system lymphoma and can regress spontaneously, leaving outer retinal abnormalities.

Kongres / Congress:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA UVEA-u / Uvea section

Titula / Title:

Dr.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Marko

Ime i prezime / First and Last Name:-Last

Lukic

85. Lana Knežević

Naslov:

Očne manifestacije Miller Fisherova sindroma: prikaz slučaja

Autori:

Lana Knežević, Maja Malenica Ravlić, Iva Krolo, Jelena Škunca Herman

Ustanova:

KBC Sestre milosrdnice

Cilj:

Miller Fisherov sindrom (MFS) je varijanta poremećaja poznatog kao Guillain-Barréov sindrom. Karakteriziran je kliničkom trijadom simptoma: oftalmoplegija, ataksija i arefleksija. Cilj je prikazati pacijenta sa atipičnim oblikom MFS koji uključuje očne i gastrointestinalne simptome, te pozitivna antigangliozidna protutijela.

Bolesnici i metode:

17- godišnji dječak se javlja u našu oftalmološku ambulantu sa dvoslikama i ptozom gornje desne vjeđe. Napravljen je kompletan oftalmološki, strabološki i neuropedijatrijski pregled.

Rezultati:

Pozitivna anti-GQ1b IgG protutijela pomogla su pri postavljanju dijagnozu MFS.

Pacijent je liječen parenteralnom terapijom imunoglobulinima u trajanju od 5 dana. Nakon praćenja u trajanju od 4 mjeseca došlo je do regresije svih simptoma.

Zaključak:

Pacijenti sa MFS mogu se prezentirati sa raznolikom kliničkom slikom te ih je važno na vrijeme prepoznati. Unatoč alarmantnoj prirodi same bolesti oboljeli imaju dobru prognozu i klinički ishod bez posljedica.

Title:

Ocular Manifestation of Miller Fisher Syndrome: a Case Report

Authors:

Lana Knežević, Maja Malenica Ravlić, Iva Krolo, Jelena Škunca Herman

Institution:

KBC Sestre milosrdnice

Aim:

Miller Fisher syndrome (MFS) is a variant of Guillain-Barré and is characterised by the clinical triad of ophthalmoplegia, ataxia and areflexia. This report presents a case of Miller Fisher syndrome based on clinical presentation characterized by ocular involvement, gastrointestinal manifestation and anti-ganglioside antibody-positivity.

Patients and methods:

A 17-year old boy was admitted to our hospital with diplopia and ptosis of upper lid of right eye. He underwent a complete ophthalmologic, strabologic and neuropediatric examination.

Results:

Positivity of anti-GQ1b IgG antibody helped us to confirm the existence of the syndrome. We treated patient with systemic intravenous immunoglobulin during 5 days and after four months of follow up all symptoms were resolved.

Conclusion:

MFS can present itself as a wide range of clinical features and its timely recognition is important. Despite the alarming nature of the disease, patients with MFS tend to have a good recovery of presented symptoms, and without any significant residual deficit.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA PEDIJATRIJSKU OFTALMOLOGIJU I STRABIZAM / Pediatric Ophthalmology and Strabismus section

Titula / Title:

Dr.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Lana

Ime i prezime / First and Last Name:-Last

Knežević

86. Karlica Utrobičić Dobrila

Naslov:

Što je novo u kirurgiji strabizma?

Autori:

Karlica Utrobičić D, Ljubić Ž.

Ustanova:

Klinika za očne bolesti KBC Split

Cilj:

Prikazati nove tehnike otvaranja spojnice kod operacije strabizma te usporediti ih sa standardnim perilimbalnim pristupom.

Bolesnici i metode:

38 pacijenata kod kojih je planiran operativni zahvat na ravnim mišićima zbog horizontalnog strabizma randomizirano je u 3 skupine: minimalno invazivni zahvat, incizija u obliku broja 7 te klasični perilimbalni pristup. Mjere ishoda bile su: vrijeme trajanja operacije, crvenilo i kemoza spojnice, osjećaj stranog tijela i suženje. Kontrolni pregledi rađeni su prvi, sedmi i trideseti postoperativni dan.

Rezultati:

Nije bilo statistički značajne razlike u vremenu trajanja operacije među skupinama. Crvenilo i kemoza spojnice, osjećaj stranog tijela te suženje bili su statistički značajno manji 1. i 7. postoperativni dan, u skupini kod koje je proveden minimalno invazivni zahvat u odnosu na druge dvije skupine. Trideseti postoperativni dan nije bili značajnije razlike među skupinama.

Zaključak:

Minimalno invazivni pristup operaciji strabizma pokazao se vremenski jednako učinkovit kao i klasični pristup, ali sa statistički značajno manjim nuspojavama te subjektivnim smetnjama.

Title:

What's new in strabismus surgery?

Authors:

Karlica Utrobičić D., Ljubić Ž.

Institution:

Clinic for eye disease, University hospital Split

Aim:

To show new techniques of conjunctival opening in strabismus surgery and compare them with the standard perilimbal approach.

Patients and methods:

38 patients who were scheduled for surgery on recti muscles due to horizontal strabismus are randomized into 3 groups: minimally invasive procedure, incision in the form of number 7 and classical perilimbal approach. The outcome measures were: the duration of the operation, redne

ss and chemosis of the conjunctiva, the feeling of a foreign body and tearing. Check-ups were done on the first, seventh and 30th postoperative day.

Results:

There was no statistically significant difference in the duration of the operation between the groups. Redness and chemosis of the conjunctiva, the foreign body sensation and tearing were significantly lower on the 1st and 7th postoperative day in the group where the minimally invasive procedure was performed compared to the other two groups. There was no significant difference on 30th postoperative day.

Conclusion:

The minimally invasive approach to strabismus surgery has proven to be as time-effective as the classical approach, but with statistically significant minor side effects and subjective symptoms.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA PEDIJATRIJSKU OFTALMOLOGIJU I STRABIZAM / Pediatric Ophthalmology and Strabismus section

Titula / Title:

Doc.dr.sc.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Dobriša

Ime i prezime / First and Last Name:-Last

Karlica Utrobičić

87. Edo Ladavac

Naslov:

Što reći pacijentu - dijabetička retinopatija

Autori:

Edo Ladavac

Ustanova:

Ladavac doo Očna ambulanta

Cilj:

Klinički prikaz načina liječenja različitih stadija dijabetične retinopatije

Bolesnici i metode:

Pacijenti sa DR ambulantno dijagnosticirani i liječeni kroz period do 7 god

Rezultati:

Pacijenti sa različitim stadijima DR koji se pravovremeno dijagnosticiraju i na adekvatan način liječe kroz duži vremenski period te redovito prate imaju v eliku mogućnost za stabiliziranje vida i zaustavljanja anatomskih patoloških promjena u sklopu dijabetesa

Zaključak:

Rano otkrivanje DR, rano započenje liječenja po algoritmima na bazi DRCR. net studija i uporno l iječenje uz korištenje danas dostupnih načina liječenja najčešće spašava pacijente od drastično g gubitka vida a time i invaliditeta.

Title:

What to tell patients about diabetic retinopathy

Authors:

Edo Ladavac

Institution:

Ladavac Eye Clinic

Aim:

The clinical presentation of treatments for various stages of diabetic retinopathy

Patients and methods:

Patients with diabetic retinopathy treated for a period up to 7 years

Results:

Patients with different stages of DR who got an early diagnoses and were treated over a long period of time and regularly monitored have a great opportunity to stabilize vision and stop the retinal anatomical pathological changes

Conclusion:

Early detection of DR, early treatment by DRCR.net study based algorithms and persistent treatment, using the currently available treatments, most often saves patients from drastic vision loss and thus disability.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJU ZA MREŽNICU / Retina section

Titula / Title:

Dr.

Specijalist / Specialist

Ime i prezime / First and Last Name:-First

Edo

Ime i prezime / First and Last Name:-Last

Ladavac

88. Karaman Martinović Željka

Naslov:

Novosti u svijetu skleralnih leća

Autori:

Karaman Martinović Željka, Lukenda Adrian

Ustanova:

Očna poliklinika Opto Centar, Zagreb

Cilj:

Prikazati najnovija promišljanja, najnovije stavove, te načine rješavanja najčešćih komplikacija vezano za fitanje skleralnih leća kod pacijenata s izrazito nepravilnim rožnicama.

Bolesnici i metode:

U Očnoj poliklinici Opto Centar dostupni su brojni dizajni skleralnih leća: Rose K2 semi-skleralna leća (Menicon) promjera 13,6 do 15,6 mm (standardno 14,6 mm), EUROPA skleralna kontaktna leća (Visionary Optics), promjera 16 i 18 mm, OneFit semi-skleralna leća (Blanchard contact lens) standardnog promjera 14,9 mm i najnovija OneFit MED mini-skleralna leća (Blanchard contact lens) standardnog promjera 15,6 mm. Koriste se Contamac i Boston materijali s propusnošću kisika od 125 do 140 Dk. Glavne indikacije za fitanje skleralnih leća su iregularne rožnice: rožnične ektazije koje obuhvaćaju keratokonus, keratoglobus, pelucidna u marginalnu degeneraciju (PMD) i postrefraktivnu ektaziju; zatim rožnični transplantati, posttraumatske rožnice i rožnični ožiljci. Još jedno važno indikacijsko područje je zaštita rožnice: uznapredovalo suho oko, Sjögrenov sindrom, perzistentni epitelni rožnični defekti, Stevens' Johnson sindrom, okularni cikatrijalni pemfigoid, neurotrofične bolesti rožnice i nepotpuno zatvaranje vjeđe.

Rezultati:

Veličina i vrsta skleralne leće određuje se na temelju stupnja složenosti stanja i ovisno o veličini vidljivog vodoravnog promjera šarenice (engl.HVID). Najnoviji podaci govore da je primjena skleralnih leća u porastu kod fitanja nepravilnih rožnica. Tako skleralne leće čine 47% fitinga, standardne RGP leće 42%, dok su hibridne leće na 3. mjestu s 11%. Specijalne mekane leće za nepravilne rožnice danas se gotovo i ne fitaju. Prema istraživanjima hibridne leće su u padu zbog neudobnosti, posebno kod velikih ovalnih keratokonusa u donjem dijelu rožnice i kod keratoglobusa. Da bi se izbjegla hipoksija i posljedični rožnični edem potrebno je koristiti materijale sa što većom propusnošću kisika. Kontaktne leće ne utječu na funkciju ili smanjenje broja endotelnih stanica, no mogu uzrokovati polimegatzizam.

Dio pacijenata može imati zamagljivanje vida tijekom dana, što je češće kod pacijenata sa suhim okom. Obično se kod takvih pacijenata preporuča povećati klirens i/ili promijeniti dizajn leće, te je često potrebno fitati skleralnu leću s toričnom periferijom.

Još se ne zna sa sigurnošću utječu li skleralne leće na povećanje intraokularnog tlaka. Problem je kako precizno izmjeriti očni tlak za vrijeme nošenja skleralnih leća.

Zaključak:

Preporučuje se uporaba što tanjih sklearlnih leća - 200-250 µm, centralni rožnični klirens bi također trebao biti 200-250 µm (izuzetak su bolesti jako suhog oka, kao što je npr. Sjögrenov sindrom). Poželjno je da materijali skleralnih leća imaju što veću propusnost kisika, najmanje 125 do 150 Dk. Dio autora preporučuje fitting skleralnih leća s toričnom periferijom u preko 90% pacijenata. Kod pacijenata koji nose skleralne leće poželjno je češće mjeriti intraokularni tlak, a poseban oprez je potreban kod glaukomskih pacijenata (češća vidna polja i OCT). Postizanje optimalnog fita i pronalaženje odgovarajuće leće kod pacijenata s izrazito nepravilnim rožnicama uvijek predstavlja izazov. Napredak u tehnologiji dizajna leća omogućava proizvođačima da dizajniraju skleralne leće koje danas mogu ispraviti puno više iregulariteta nego ikad prije i da zadovoljavaju sve potrebne gore navedene parametre.

Title:

News in the world of scleral lenses

Authors:

Karaman Martinović Željka, Lukenda Adrian

Institution:

Eye Polyclinic Opto Centar, Zagreb

Aim:

To present the latest thoughts, the latest attitudes, and ways to solve the most common complications related to scleral lenses fitting in patients with extremely irregular corneas.

Patients and methods:

Numerous scleral lens designs are available at the Opto Centar Eye Polyclinic: Rose K2 semi-scleral lens (Menicon) diameter 13,6 to 15,6 mm (standard 14,6 mm), EUROPA scleral contact lens (Visionary Optics), diameter 16 and 18 mm, OneFit semi-scleral lens (Blanchard contact lens) standard diameter 14,9 mm and the newest OneFit MED mini-scleral lens (Blanchard contact lens) standard diameter 15,6 mm. Contamac and Boston materials with an oxygen permeability of 125 to 140 Dk are used. The main indications for fitting scleral contact lenses are irregular corneas: ectasias which include keratoconus, keratoglobus, pellucid marginal degeneration (PMD) and post-refractive surgery ectasia; then corneal transplants, post-traumatic corneas and corneal scars. Another important indication is corneal protection: advanced dry eye, Sjögren's syndrome, persistent epithelial corneal defects, Stevens' Johnson Syndrome, ocular cicatricial pemphigoid, neurotrophic corneal disease, and incomplete lid closure.

Results:

The size and the type of scleral lens used is often determined by the degree of complexity of the condition and HVID (horizontal visible iris diameter). The latest data show that the use of scleral lenses is on the rise when fitting irregular corneas. Scleral lenses are fitted in 47% of cases, standard RGP lenses are at 42%, while hybrid lenses are in 3rd place with 11%. Special soft contact lenses for irregular corneas are almost never fitted today. According to research, hybrid lenses are in decline due to discomfort, especially in large oval keratoconus in the lower cornea and in keratoglobus.

In order to avoid hypoxia and consequent corneal edema, it is necessary to use materials with the highest possible oxygen permeability. Contact lenses do not affect the function or the decrease in the number of endothelial cells, but can cause polymegatism.

A certain number of patients have midday fogging during the day, which is more common in patients with dry eyes. It is usually recommended for such patients to increase the clearance and / or to change the lens design, and it is often necessary to fit a scleral lens with a toric periphery. It is not yet known with certainty whether scleral lenses affect the increase in intraocular pressure. The problem is how to accurately measure intraocular pressure while wearing scleral lenses.

Conclusion:

It is recommended to use scleral lenses as thin as possible - 200-250 μm , the central corneal clearance should also be 200-250 μm (with the exception of very dry eye diseases, such as Sjögren's syndrome). Preferably, the scleral lens materials should have as much oxygen permeability as possible, at least 125 to 150 Dk. Some authors claim that as many as 90% of patients should be fitted with a scleral lens with a toric periphery. Intraocular pressure should be measured more frequently in patients wearing scleral lenses, and special caution is required in glaucoma patients (more frequent visual fields and OCT). Achieving optimal fit and finding the right lens in patients with severely irregular corneas is always a challenge. Advances in lens design technology allow manufacturers to design scleral lenses that today can correct far more irregularities than ever before and meet all the necessary parameters listed above.

Kongres / Congresse:

20. Kongres HOOD-a

Abstract category / Sažetak prijavljujem u:

SEKCIJA ZA KONTAKTOLOGIJU / Contactology section

Titula / Title:

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Karaman Martinović