CONTENTS

Dear Colleagues and Friends,

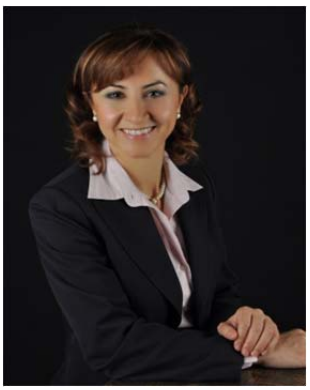
We are honoured to organize 7th MediteRRetina Club Meeting in 2014 in Istanbul, Turkey. It will be our pleasure to be the householders for this very lovely MediteRRetina Club Meeting as we will be sharing or experiences and knowledge with our colleagues from different countries of the world.

What we feel about this meeting is that it opens all the doors for friendship between international participants while sharing personal experiences to solve difficult/ different problems which we face during vitreoretinal practice in a friendly atmopsphere. In the meantime we hope to have time to get to know the city, to escape from the formalities to have fun and see different places and taste different delights.

We are pleased to be with you in fascinating Istanbul to share our experiences in retina in a friendly ambiance.

We wish you a fruitful congress with a lot of nice memories to take back home.

Best regards,



Şengül Özdek MD

Nur Acar MD, F.E.B.O.

PROGRAM

17 April 2014, Thursday	
12:00-13:30	**Lunch**
13:30-13:45	**Opening Ceremony**
13:45-15:30	**DIABETIC RETINOPATHY** **Chairs :** *Athanasios Nikolakopoulos, Ziya Kapran, Nilüfer Koçak*
13:45-14:00	**Do we need a classification and scoring system for DME?** *Süleyman Kaynak*
14:00-14:20	**Macular Edema Treatment. EVRS DME study** *Didier Ducournau*
14:20-14:27	**OCT-based pathogenesis and apparent treatment for Diffuse Diabetic Macular Edema: Up-date, 2014** *Avinoam Ophir*
14:27-14:34	**Successful grid laser photocoagulation for diffuse diabetic macular edema necessitates exclusion of extrafoveal traction** *Avinoam Ophir, Rana Hanna, Michael R. Martinez*
14:34-14:41	**Feasibility of topical treatment in macular edema** *Poposki V. Vilaplana, D. Jürgens, I. Poposka, D. Dyrda, A. Londoño, G. Alarcon, I. Martinez Giralt, O. Castilla M*
14:41-14:48	**Comparison of Modified Grid laser & Intravitreal Bevacizumab, and Mild Macular Laser & Intravitreal Bevacizumab in the Treatment of Clinically Significant Diabetic Macular Edema** *Mustafa Güzey, Y. Isık, H. Yücel, Ö.F. Yılmaz*
14:48-14:55	**Comparison of Single Session Panretinal Photocoagulation (SSPRP) with Multiple Session Panretinal Photocoagulation (MSPRP) for Diabetic Retinopathy: Short Term Results** *Özlem Şahin, Hande Çeliker, Azer Erdağı Bulut, Haluk Kazokoğlu*
14:55-15:02	**Using small-gauge endodiathermy probe as an aid to elevate tractional membranes during pars plana vitrectomy in eyes with DTRD** *Nur Acar*
15:02-15:09	**Vitrectomy for diabetic macular edema: different concepts and my way** *Khaled El Rakhawy*
15:09-15:30	**Discussion**
15:30-16:00	**Coffee Break**
16:00-17:25	**NEW VITRECTOMY INSTRUMENTATION** **Chairs:**Berati Hasanreisoğlu, Vladimir Poposki, *Khaled El Rakhawy*
16:00-16:20	**How to optimize my vitrectomy machine parameters to have a more efficient and less dangerous surgery** *Didier Ducournau*
16:20-16:27	**27G Surgery: Advantages and disadvantages** *George Pappas*
16:27-16:34	**Evolution in bimanual retinal detachment surgery** *Athanasios Nikolakopoulos*
16:34-16:41	**Wide angle surgery with the EIBOS 2 and hydrolifting in macula interface disorders** *Athanasios Nikolakopoulos*

16:41-16:48	**Silicone Oil Surgery in MIVS Era .** *Ziya Kapran*
16:48-16:55	**Macular Traction Syndromes** *Katerina Papadopoulou*
16:55-17:02	**Comparison of Visual Function using microperimetry and Central Visual Field in Macular Hole Surgery** *Justus G. Garweg, David Brunner, Markus Halberstadt*
17:02-17:25	**Discussion**
17:25-18:05	**PEDIATRIC RETINA** **Chairs:**Nur Kır, Şengül Özdek
17:25-17:32	**The late structural outcomes of cryotherapy for retinopathy of prematurity** *Özlem Şahin, Eren Cerman, Hande Çeliker, Haluk Kazokoğlu*
17:32-17:39	**My Way of Intravitreal Bevacizumab Treatment for Retinopathy of Prematurity** *M.C. Ozmen, S.M. Karaatlı, E. Köklü, S. Kalay, Şengül Ozdek*
17:39-17:46	**Results of VRS for Stage 4-5 ROP** *Duygu Yalınbaş, Cüneyt Özmen, Şengül Özdek,H.Tuğba Atalay*
17:46-17:53	**Surgery for Persistant Fetal Vasculature Syndrome: When and how?** *Şengül Özdek, Ali Miraç Yavruoğlu, Baran Özdemir, H.Tuğba Atalay*
17:53-18:05	**Discussion**
19:30-22:30	**Welcome Reception** *(Hotel Hilton Bomonti)*
18 April 2014, Friday	
08:30-10:20	**ANTERIOR SEGMENT MEETS THE POSTERIOR** **Chairs:** Vincent Repucci, Tunç Ovalı, Levent Karabaş
08:30-08:37	**Complications of Phacoemulsification Cataract Surgery Performed by Senior Residents** *Richard Ober*
08:37-08:44	**Different strategies in IOL dislocations** *Levent Karabaş*
08:44-08:51	**Re-usable scleral fixated IOLs** *Stratos Gotzaridis*
08:51-08:58	**Chopping dropped nucleus with a new intraocular forceps during pars plana vitrectomy** *Nur Acar*
08:58-09:05	**Treating Choroidal Effusion Syndrome** *George Pappas, A. Angelakis*
09:05-09:12	**Analysis of development of Eye Ischemic Syndrome during the postoperative period** *D. Makhkamova, H. Kamilov, M. Kasimova*
09:12-09:19	**Inferior retinectomy for the treatment of refractory neovacular glaucoma** *Cengiz Aras*
09:19-09:26	**Postraumatic suprachoroidal haemorrhages after blunt trauma in previous PK: overcoming a Taboo** *Cesare Forlini, Matteo Forlini, Ekin Türkmen*

09:26-09:33	**Vitreoretinal Surgery with Temporary Keratoprosthesis and Iris Retention Sutures for Combined Eye Trauma** *Ziya Kapran*
09:33-09:40	**Outcome of Vitrectomy for Suprachoroideal Hemorrhage** *Justus G. Garweg, Martin Landolt, Markus Halberstadt*
09:40-09:47	**Post-traumatic aniridia: the united colors of the artificial iris** *Cesare Forlini, Matteo Forlini*
09:47-09:54	**Iris reconstruction surgery** *Levent Karabaş*
09:54-10:20	**Discussion**
10:20-11:00	**Coffee Break**
11:00-12:00	**TRAUMA SESSION** **Chairs:** Cesare Forlini, Hakan Durukan, Tuğrul Altan
11:00-11:07	**The Use of Continuous Silicone Oil Infusion as Preoperative Tool in a Severely Traumatized Eye** *Ziya Kapran*
11:07-11:14	**Bimanual removal of large foreign bodies with the use of a suture loop, and a new designed foreign body forceps** *Nur Acar*
11:14-11:21	**Case report: Subretinal hunting bullet** *Cesare Forlini, Matteo Forlini*
11:21-11:28	**Outcomes of vitrectomy with temporary keratoprosthesis or endoscopy in combat ocular trauma.** *A. Hakan Durukan, Cüneyt Erdurman, Güngör Sobacı*
11:28-11:35	**Severe ocular trauma: The use of temporary keratoprosthesis in the "pole to pole "surgery** *Matteo Forlini, Cesare Forlini*
11:35-12:42	**A case with traumatic subretinal hemorrhage** *Levent Karabaş*
11:42-12:00	**Discussion**
12:00-13:30	**AGE RELATED MACULAR DEGENERATION** **Chairs:** Bora Eldem, Stratos Gotzaridis, Agnieszka Nowosielska
12:00-12:07	**Management of neovascular ARMD with PED.** *Sibel Kadayıfçılar*
12:07-12:14	**Lack of basic epidemiological data and power calculations in published Anti-VEGF randomized controlled trials** *Fehim Esen, Hande Celiker, Özlem Alhan, Pınar Kuru, Özlem Şahin.*
12:14-12:21	**Tachyphylaxis to anti-VEGFs during management of wet ARMD.** *Şengül Özdek, Sibel Doğuizi*
12:21-12:28	**My way in anti- VEGF non- responders** *Janusz Michalewski, Zofia Michalewska, Jerzy Nawrocki*
12:28-12:35	**The Use of Aflibercept in resistant AMD cases** *George Pappas, A. Angelakis*

12:35-12:42	**Strategies for limited submacular hemorrhage management** *Şengül Özdek,Özgür Çubukçu*
12:42-12:49	**Surgical Management of non responding to anti-VGEF wet/haemorrhagic AMD.** *Stratos Gotzaridis*
12:49-12:56	**Pedunculated choroidal – RPE patch transplantation in severe neovascular macular degeneration** *Cesare Forlini, Matteo Forlini*
12:56-13:30	**Discussion**
13:30	**Lunch**
18:30-22:30	**Dinner at Kumkapı** *(Dress Code: casual)*

19 April 2014, Saturday

08:30-10:20	**RETINAL DETACHMENT** **Chairs:** Didier Ducournaou, Cengiz Aras, Angelina Meireless
08:30-08:37	**The use of chandelier endoilluminator during the surgical scleral buckling approach for the repair of retinal detachment** *Rino Frisina, J.S. Pinackatt, Barbara Parolini*
08:37-08:44	**Peripheral Vitrectomy Under Air in Rhegmatogenous Retinal Detachment** *T. Altan, K. T. Özbilen, R. H. Babayev*
08:44-08:51	**Pneumatic retinopexy in big tears** *Gürsel Yılmaz*
08:51-08:58	**Long-term outcomes of retinal detachment due to acute retinal necrosis** *Cengiz Aras*
08:58-09:05	**Segmental Scleral Buckle: an important and overlooked procedure in retinal detachment repair surgery allowing for the most rapid visual and functional recovery.** *Vincent Reppucci*
09:05-09:12	**Subfoveal choroidal thickness after scleral buckling surgery with and without encircling band for macula-off rhegmatogenous retinal detachment in long-term observations.** *Dominik Odrobina, Iwona Laudańska-Olszewska, Piotr Gozdek, Mariusz Maroszyński, Andrzej Grzybowski*
09:12-09:19	**Blood-aqueous barrier breakdown and retinal detachment surgery: what relationship?** *Salim Ben Yahia*
09:19-09:26	**Choroidal thickness changes following retinal detachment and vitrectomy surgeries measured with EDI-OCT** *İmren Akkoyun*
09:26-09:33	**SD-OCT study of persistent subretinal blebs after retinal detachment repair** *A.P. Ciardella, M. Morara, C .Veronese, C. Torrazza, T. Perossini, A .Piccinini, F. Pichi.*
09:33-09:40	**Analysis of the time and location of the silicone oil emulsification by spectral-domain optical coherence tomography after silicone oil tamponade** *D. Odrobina, I Laudanska-Olszewska*
09:40-09:47	**Heavy silicone oil as first choice in complicated retinal detachment: Checkmate in two moves!** *Cesare Forlini, Matteo Forlini*

09:47-10:20	**Discussion**
10:20-11:00	**Coffee Break**
11:00-13:00	**MACULAR SURGERY** **Chairs:** George Pappas, Salim Ben Yahia, Nur Acar
11:00-11:07	**Strategy for the management of optic pit maculopathy** *Angelina Meireles*
11:07-11:14	**Different strategies for the surgical treatment of optic pit maculopathy** *Şengül Özdek, Baran Özdemir*
11:14-11:21	**One port pars-plana 27G with reflow strategy for macular diseases** *Cesare Forlini, Matteo Forlini*
11:21-11:28	**Surgical indications and outcomes for Myopic Traction Maculopathy** *Angelina Meireles*
11:28-11:35	**Lateral capillary forces as the sole mechanism of closure in Macular Holes** *Vincent Reppucci*
11:35-11:42	**Peroperatory closure of recurrent large macular holes** *Levent Karabaş*
11:42-11:49	**Massaging Large Macular Holes** *G.D. Pappas, A. Angelakis, E. Paragioudakis*
11:49-11:56	**Unusual closure of macular holes-description of several interesting cases** *D. Odrobina, Laudanska-Olszewska I.*
11:56-12:03	**Membranectomy under PFC liquids** *Remzi Avcı*
12:03-12:10	**Vitreous staining during macular hole surgery-my way** *Agnieszka Nowosielska*
12:10-12:17	**Microperimetry use in clinical practice** *Fevzi Şentürk*
12:17-12:24	**Process of histapathological study retinal membrane of different retinal Disease** *Nabil Taresh, Ameen Okbh, Basma Al-Refaei Msc*
12:24-13:00	**Discussion**
13:00-14:30	**Lunch**
14:30-15:20	**RETINAL VEIN OCCLUSIONS** **Chairs:** Sibel Kadayıfçılar, D. Odrobina, Flores-Aguilar Martin
14:30-14:37	**Scatter photocoagulation of nonperfused retina for the treatment of persistant macular edema in RVO.** *Bora Eldem*
14:37-14:44	**Micropulsed laser for the treatment of macular edema** *Flores-Aguilar Martin*
14:44-14:51	**Alterations of ocular dimensions following intravitreal dexamethasone implant injection for branch retinal vein occlusion with macular edema** *O. Cekic, S. Akkaya Turhan*

14:51-14:58	**Surgical treatment of retinal vein occlusion: a case series** *S. Lippera, L. Marcucci, G. Pallotta, P. Ferroni, S. Morodei, L. Mercanti.*
14:58-15:05	**Endovascular surgery in central retinal vein occlusion** *Levent Karabaş*
15:05-15:20	**Discussion**
15:20-15:50	**OCULAR TUMORS&UVEA** **Chairs:** Süleyman Kaynak & Richard Ober
15:20-15:27	**Different surgical strategies for the treatment of Retinal Angiomas** *Aylin Karalezli, Şengül Özdek*
15:27-15:34	**Relevance of Indocyanine Green Angiography for the Diagnosis of Noninflammatory Chorioretinal Diseases** *Salim Ben Yahia*
15:34-15:41	**Endophtalmitis after uncontrolled drug usage and toxicity after cataract surgery** *Nilüfer Koçak, Süleyman Kaynak*
15:41-15:50	**Discussion**
15:50-16:30	**Coffee Break**
16:30-17:00	**MISCELLANEOUS** **Chairs:** Avinoam Ophir, Gürsel Yılmaz
16:30-16:37	**Assessment of patient pain experience during intravitreal bevacizumab and ranibizumab injection** *M. Güler, B. Bilgin, M. Çapkın, A. Şimşek, Ş. Bilak*
16:37-16:44	**Intravitreal Bevacizumab in Patients with Central Serous Chorioretinopathy** *C. Unlu, G. Erdogan, T. Aydogan, E. Kardes, B. Sezgin Akcay, T.K. Bozkurt*
16:44-17:00	**Discussion**
17:00-17:15	**Closing Ceremony**

ABSTRACTS - ORAL

O -1

Do we need a new classification and scoring system system for diabetic macular edema?

Süleyman Kaynak

In last years diabetic macular edema is one of the most controversial topic in ophthalmology. Because, recently we have some medical treatment options more than laser such as anti VEGF and steroids. In time, diagnosis, treatment, follow up and repeating criteria of the treatment are changed very fast because of dealing the OCT data besides of the clinical and FFA findings. Therefore,in last years we may need some new and standart criteria about this hot topic for diagnosis, treatment and repeating criteria, follow up and especially prognostic evaluation.

Clinical evaluations were performed by slit lamp biomicroscopy and reading of the stereoscopic photographs of the fundus. Then FFA evaluations are performed on angiograms as focal, diffuse, mixed or ischemic maculopathy then OCT criteria still controversial and sometimes very difficult to define a correlation with the other data especially with visual acuity.

Therefore, in immediate future, we may need a new scoring system about the diabetic macular edema which is matching the visual acuity with the other data such as systemic (HbA1c), clinical, angiographic findings and OCT results those are involving the thickness, topographic and morphologic changes of the central macula, integrity of the retinal layers and tractional forces which are evaluated with SD –OCT.

O -2

Macular Edema Treatment. EVRS DME study

Didier Ducournau

O -3

OCT-based pathogenesis and apparent treatment for Diffuse Diabetic Macular Edema: Up-date, 2014

Prof. Avinoam Ophir,

Dept. of Ophthalmology Wolfson Medical Center, Holon, Israel.

PURPOSE: The therapeutic efficacy of diffuse diabetic macular edema (DDME) is still poor, mainly since its pathogenesis is obscure. I present herein the cumulative OCT up-date data on DDME pathogenesis and its anticipated treatment.

CONTROVERSIES: There is a major controversy regarding the preferred order of treatment for DDME: Grid laser photocoagulation (GLP) – though it entails low efficacy, intravitreal medications such as anti-VEGF / steroids - though with a common need of re-injections for months and years, or pars plana vitrectomy (PPV).

EFFECTIVENESS: Full-field- 3-D OCT of the posterior pole disclosed that DDME is associated with tractional phenomena (including ERM) in more than 75% of eyes (n=58; Ophir et al., Eye 2010). This includes the common, previously overlooked extrafoveal vitreous traction by the posterior hyaloid connected to the retina at 1-4 mm from the fovea, or to the ONH. A tractional membrane, often multi-focal, typically causes an underlying retinal edema that continuous to a resultant DDME. PPV would expectedly be beneficial for DDMEs as such. The multicenter EVRS study (n=870, Dresden 2012: http://www.evrs.eu/2012-evrs-congress-dresden/), the only large study comparing PPV with intravitreal medications such as anti-VEGF or steroids, indirectly fortified this OCT-based understanding, showing substantial superiority of PPV over the medications.

In contrast, key DME studies claimed superiority of intravitreal medications over GLP [did not compare them to PPV]. However, these large studies commonly used only time-domain OCT and 6-radial lines, and thus obviously could miss extrafoveal traction phenomena. And, they often included ERM cases in these series. But, the prevalence of extrafoveal traction and ERM could exceed 50% (!) of DDME studied eyes, as described (Eye 2010), rendering conclusions questionable: The medications under investigation could naturally reduce macular edema temporarily and partially even in the presence of traction, by temporarily tightening leaking capillary junctional complexes, but repeat injections were constantly required. In contrast, GLP would not improve edema if associated with traction.

- And indeed, GLP was efficacious in non-tractional, non-ischemic DDME eyes with central edema (n=18; IJO 2013): After 16 months (mean), improvement of central edema by 26% (mean) was achieved in >77% of eyes. Causes of recurrent edema were mostly tractional and treatable.

TIPS: Full-field- 3D OCT is necessary for detecting or excluding extrafoveal vitreous traction, a prerequisite for efficacious treatment of DDME.

TAKE HOME MESSAGE: The cumulative data indicate that DDME is typically associated with traction, and PPV should then be considered. The non-tractional DDME cases responded efficaciously to GLP for at least a mid-term follow-up.

O -4

Successful grid laser photocoagulation for diffuse diabetic macular edema necessitates exclusion of extrafoveal traction

SETTING: Prof. Avinoam Ophir, Dr. Rana Hanna and Dr. Michael R Martinez, Dept. of Ophthalmology at Wolfson and Hillel-Yaffe Medical Centers, Israel.

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The authors declare no conflict of interest

PURPOSE: The outcome of modified grid laser photocoagulation (GLP) for diffuse diabetic macular edema (DDME) is still poor, and causes of success or failures are often obscure. A group of DDME eyes in which GLP was efficacious after mid-term follow-up is presented.

CRITERIA FOR GLP: Included in the retrospective study were DDME eyes of type II diabetic patients, one eye per patient, with 4-24 months of follow-up after GLP(s). Using full-field 3-D spectral-domain optical coherence tomography (FF- 3-D- OCT), eyes that had extrafoveal (vitreoretinal or vitreopapillary) traction associated with the DDME, vitreofoveal traction, central epiretinal membrane or Evi membrane, or had been previously treated intravitreally were excluded. Treated eyes were divided into 3 groups: A) "Classic" DDME that involved the central macula; B) edema did not involve the central macula; C) DDME was associated with macular capillary dropout ≥2 disc-diameter (DD).

EFFECTIVENESS: Thirty DDME eyes were included in the analysis: Group A) 18 "classic", central and perfused DDME. Following 1-2 (mean, 1.2) GLPs during 15.9±7.4 months, BCVA improved by 1-2 Snellen lines in 44.4% (8/18) and worsened by 1 line in 11% (2 eyes); central macular thickness reduced by 7%-49% (mean, 26.6%) in 77.8% (14/18) of eyes. Failures (n=4) were associated with, a) emergence of extrafoveal traction associated with new incomplete PVD (n=3) at months 5-9; b) macular capillary dropout (n=1; month 19). Group B) 1-2 GLPs (n=6) improved BCVA by 1-2 lines (n=2) during 11.8±7.3 months' follow-up. However, the central macula became edematous in 3 (50%) eyes, with emergence of extrafoveal traction (n=1) at month 4. Group C) GLP was of partial benefit in 2/6 eyes (f-up, 8±3.5 months).

MY WAY - TIPS: The relatively high success rate of GLP during mid-term follow-up, was (also) possible by avoiding GLP from eyes with extrafoveal vitreous traction, a common and previously overlooked phenomenon in DDME. Unequivocal detection of extrafoveal vitreous traction is typically possible by the use of a FF- 3-D- OCT.

CONCLUSIONS: DDME that involves the macular center may reach successful GLP during mid-term follow-up unless complicated pre-GLP or post-GLP by tractional abnormality, often extrafoveal traction or ERM, or by capillary dropout ≥2DD.

TAKE HOME MESSAGE: GLP was found efficacious during mid-term follow-up in eyes with "classic" DDME. Causes of edema recurrences were apparent and mostly treatable.

Sözel Sunum -5

FEASIBILITY OF TOPICAL TREATMENT IN MACULAR EDEMA

Poposki V. Vilaplana D. Jürgens I. Poposka D. Dyrda A. Londoño G. Alarcon I. Martinez Giralt O. Castilla M.

Hospital de la Esperanza; Institut Catala de Retina; Barcelona Spain

OBJECTIVES: To evaluate the efficacy of topical nepafenac in patients with impaired blood-retinal barrier (BRB) in the macular area.

METHODS: In a prospective pilot study 15 eyes were included; in the first visit and controls complete eye examination was performed (mean follow-up: 79 days). Visual acuity (VA), central thickness (CT) and macular volume (MV) were evaluated. All patients (mean age: 72.7 years) were analyzed before and after the treatment, and then sub - analysis of two groups was made: A) with diffuse diabetic macular edema - DDME and B) with Irvine - Gass syndrome.

RESULTS: Patients had an initial VA of 0.40 with a final improvement of 0.46 ($p = 0.026$), the CT was reduced from 394.92 to 292 microns ($p = 0.002$) and MV showed a global decrease of 11.26 to 10.65 mm3 ($p = 0.013$). Analyzed sub-parameters, group A (DDME) except in the VA ($p = 0.08$), the difference was significant reduction in CT ($p = 0.01$) and MV ($p = 0.05$). Patients with post-surgical macular edema (group B) had statistically significant differences in VA ($p = 0.02$) and the central thickness ($p = 0.03$) but not in the MV ($p = 0.17$).

CONCLUSIONS: In our study, nepafenac has proven to be clinically safe and effective treatment, capable of stabilizing the BRB and thereby, reduce macular edema and restore vision. The obtained visual benefit was better in patients with Irvine - Gass syndrome than with DDME.

O -6

Comparison of Modified Grid laser & Intravitreal Bevacizumab, and Mild Macular Laser & Intravitreal Bevacizumab in the Treatment of Clinically Significant Diabetic Macular Edema

M Güzey, Y Isık*, H Yücel*, ÖF Yılmaz**

Harran University School of Medicine Department of Ophthalmology Sanliurfa Turkey

~~Purpose: To compare two modalities for treatment of clinically significant diabetic macular edema (CSDME); the modified grid photocoagulation & 1.25 mg intravitreal bevacizumab (MGP&IVB) and mild macular photocoagulation & 1.25 mg intravitreal bevacizumab (MMP&IVB).

Methods-My Way-Tips: MGP is a modified ETDRS direct-grid photocoagulation technique and MMP is a mild macular laser technique in which small burns are placed throughout the macula using a 532 nm Frequency Doubled Nd: YAG laser. 68 subjects with CSDME were assigned randomly to receive combinated treatment by either the MGP&IVB (35 eyes) or MMP&IVB (38 eyes) modality. Study groups matched for best corrected visual acuity (BCVA) and Heidelberg Retinal Tomographer III (HRT III) based central macular edema index (CMEI). Primary outcome measure was change in CMEI at 3 months follow-up.

Results-Effectiveness: Both of the modalities showed significant reductions in macular edema and there were no statistically significant differences between the groups CMEI and BCVA values. No patients developed endophthalmitis, uveitis or intraocular pressure elevation higher than 21 mm Hg.

Conclusions: In a comparative effectiveness randomized clinical trial; at 3th months MGP&IVB and MMP&IVB modalities appeared effective at reducing HRT III measured CMEI and the visual acuity outcome.

Take Home Message: MMP technique for CSDME may be as effective as classic modified ETDRS photocoagulation, thus supporting the rationale for a larger equivalence trial. IVB injections may give favorable results within the first 3 months. We have also suggested a relatively simple method of documenting change in diabetic macular edema with HRT III macular edema module.

O -7

Comparison of Single Session Panretinal Photocoagulation (SSPRP) with Multiple Session Panretinal Photocoagulation (MSPRP) for Diabetic Retinopathy: Short Term Results

Özlem Şahin, Hande Çeliker, Azer Erdağı Bulut, Haluk Kazokoğlu

Marmara University School of Medicine, Pendik Hospital, Department of Ophthalmology

Purpose: To compare the comfort and affects of single session panretinal photocoagulation (SSPRP) versus multiple session panretinal photocoagulation (MSPRP) in patients with diabetic retinopathy (DR).

Effectiveness: It has been shown that short pulsed laser (20 ms) with pattern laser (SSPRP) causes less damage on RNFL compared to conventional 100 ms multisession laser (MSPRP). We aimed in this study to compare the comfort (pain) and the affects of SSPRP and MSPRP on macula [central macular thickness (CMT)], choroid [subfoveal choroidal thickness (SFCT)], ganglion cell layer (RNFL) and retinal sensitivity (MD). Methods: The study was performed on 42 eyes of 21 patients with treatment naïve DR. Each patients's one eye treated with SSPRP and the other eye with MSPRP. SSPRP was performed with pattern scanning laser (Valon STA) and MSPRP was performed with conventional laser (Visulas 532s). Comfort is evaluated by using [Visual Analog Scale (VAS)]. CMT, RNFL thickness and evaluated with spectral domain OCT (Optovue, Fremont USA). Retinal sensitivity is evaluted with 30-2 SITA standard visual field and change in mean deviation (MD) noted. Change in every parameter was noted for all patients for (1st month, 2nd month and 3rd month) 3 months.

Results: In SS-PRP 1982±681 and in MS-PRP 1163±309 burns were applied ($p<0, 0001$). The mean power was 176±45 mW (MSPRP) and 624±148 mW (SSPRP) ($p<0, 0001$). In both procedures there was not significant change in CMT and SFCT in all three visits ($p>0.05$). VAS was also found similar for both SSPRP (2.4±1.9) and MSPRP (3.0±1.7) in both groups ($p>0.05$). RNFL showed significant increase in MSPRP at 1 month (3,74 μm, $p=0,03$), but not at 3 month ($p>0.05$). RNFL did not show any change in SSPRP at any visit ($p>0,05$). MD didn't show significant change in both procedures in all visits ($p>0.05$).

Conclusion: SSPRP with Valon was found comfortable as MS with conventional laser. Long term results should be reevaluated to get a final conclusion.

Take home message: Laser technology is evolving and with SSPRP we can save our and patients' time which is very critical while following patients with DR.

O -8

Using Small-gauge Endodiathermy Probe As An Aid to Elevate Tractional Membranes During Pars Plana Vitrectomy in eyes with Diabetic Traction Retinal Detachment

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Purpose: Eyes with diabetic traction detachment (DTRD) can differ in severity. Systemic control and medication is also very important, which may play a role in the intraoperative and postoperative follow-up. One important complication during surgery is bleeding; when cannot be contolled effectively during pars plana vitrectomy, can cause difficulty in membrane dissection, and even complicate the procedure with retinal tear formation. Preoperative injection of anti-vegf intravitreally can reduce dramatically the intraoperative bleeding, which should be performed in certain time range. Using endodiathermy, on the other hand is another tool surgeons use to control the intraoperative bleeding.

My way of using endodiathermy is to apply it onto the fibrovascular traction membranes to elevate them from the retina and create a plane for safer delamination.

Methods: Transconjunctival pars plana vitrectomy for the treatment of DTRD is demonstrated. As a surgical technique, after removal of vitreus, intravitreal trimcinolone is injected to check for vitreoschisis and removal of posterior hyaloid. Tractional membranes are identified. 23-g, or 25-gauge endodiathermy probes, which are thinner at the end are used during PPV. Endodiathermy probe is used with a medium power onto the membrane avoiding any retinal tissue. With the heat energy the membrane is constricted and lifted above the retinal plane. After that membrane delamination is performed with a small-guage high-cut vitrectomy probe or bimanually with a forceps and a horizontal scissor. Following membrane delamination, endolaser is performed, and endotamponade is given.

Conclusion: In all eyes with DTRD, endodiathermy effectively helped to lift the membranes. This technique also helped to decrease the bleeding from the fibrovascular membranes during delamination. Membranes could be delaminated in all eyes. Endodiathermy was not effective when performed onto vitreous gel. No retinal tear occurred. No complication related with this technique was encountered. In all eyes retinas were attached.

Take home message: Pars plana vitrectomy for the management of diabetic traction detachments can vary in severity, and intraoperative bleeding can even complicate the surgical maneouvers. Small-gauge endodiathermy probes are elegant enough to apply to the fibrovascular traction membranes only, to constrict them and cause them to lift above the retinal planes, avoiding any retinal tissue. This creates a tissue plane for the vitrector/ scissors to delaminate safely. It also decreases bleeding from the membranes during delamination, provides better vision, which may decrease complications like retinal tear formation.

O -9

Vitrectomy for diabetic macular edema: different concepts and my way

Khaled El Rakhawy

At present, the exact role of vitrectomy for diabetic macular edema (DME) remains controversial.. Conflicting reports exist on the indications of pars plana vitrectomy in DME without evidence of vitreomacular traction.

On the other hand the presence of vitromacular traction is usually considered a clear indication for vitrectomy,.However, in some views, the visual outcome may not always parallel the achieved anatomical improvement.

This talk aims at presenting the author's view on some of the relevant still open questions such as the indications of surgery and case selection, the timing of surgery in relation to other options, as well as the preferred techniques. This presentation can possibly provide a ground for further discussion among participants on " my way" for DME

O -10

How to optimize my vitrectomy machine parameters to have a more efficient and less dangerous surgery

Didier Ducournau

O -11

27 g Surgery

G Pappas

Venizeleio Hospital of Heraklion

I am presenting a case performed with 27 g and analyzing positive and negative of the new operating system

O -12

Evolution in bimanual retinal detachment surgery

Athanasios Nikolakopoulos

O -13

Wide angle surgery with the EIBOS 2 and hydrolifting in macula interface disorders

Athanasios Nikolakopoulos

O -14

Silicone Oil Surgery in MIVS Era.

Ziya Kapran

Silicone removal by MIVS was considered impossible. However, improvement in the instrumentation utilizing new techniques enables removal of both 1,000 and 5,000 centistokes SiO. We will introduce new silicone oil removal cannulas which decreases the incidence of surgical trauma.

O -15

Macular Traction Syndromes

Katerina Papadopoulou

O -16

Comparison of Visual Function using Microperimetry and Central Visual Field in Macular Hole Surgery

Justus G. Garweg, **, David Brunner***, Markus Halberstadt***

Swiss Eye Institute, Rotkreuz* Berner Augenklinik am Lindenhofspital, Bern** Depratment Ophthalmology, University of Zürich, Switzerland***

Introduction: Automated visual field analysis has been used since decades to follow the evolution of central and peripheral visual field namely in glaucoma and neuro-ophthalmological pathologies. Microperimetry (MP) has been established more recently to improve the description of macular function in macular diseases in comparison to visual acuity. Both methods have been used to compare functional and anatomic outcomes after macular hole surgery, but not describe visual recovery after macular hole surgery. Patients and Methods: Here, we prospectively compared central visual field (CF) testing (Octopus 101, program M2) and MP (Nidek MP-1) regarding their suitability for testing of macular function in 40 patients with macular holes Gass stadium 2-4 preoperatively and one month after macular hole closure. Patients had to be pseudophakic or obtained vitrectomy combined with cataract surgery.

Results: Systematic differences between the two methods with respect to the quantitative description of macular sensitivity (MS; preoperatively 27.7, postoperatively 26.3 dB for VF, 16.6 and 14.3 dB for MP, respectively; $p<0.0001$) and mean defect (MD; preoperatively 27.7, postoperatively 26.3 dB for VF, 16.6 and 14.3 dB for MP, respectively; $p<0.0001$). Moreover, the absolute values for MS and MD differed significantly (+1.5 and -1.4dB for CF and +2.3 and +1.4dB for MP, respectively; $p<0.001$). Finally, both correlated well with visual function. The duration of the diagnostic procedure differed between the tests (5.5 minutes for MP and 2.7 minutes for CF; $p<0.0001$).

Conclusion: Both tests compared well to visual acuity. The difference in sensitivity and depth of defect indicates that absolute values for MS and MD have to be interpreted with care. The accuracy of describing macular function is thus not comparable, but the shorter test duration and the broad availability of automated perimeters is clearly in favour of the latter.

O -17

The late structural outcomes of cryotherapy for retinopathy of prematurity

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PURPOSE: To describe the clinical characteristics of patients with retinopathy of prematurity treated with cryotherapy.

EFFECTIVENESS: Cryotherapy for retinopathy of prematurity might be an effective treatment modality as a second choice.

MATERIAL AND METHODS: 17 infants treated with cryotherapy for threshold disease between 2000 and 2005 were included. All patients were examined by the first author. Patients were assessed for visual acuity,presence for nystagmus and ocular misalignment. Fundus was evaluated for optic disk changes and retinal vascular changes. Abnormal branching of retinal vessels, retinal thinning, lattice like degenerations, tortuosity of vessels, straightening of temporal vessels, narrowing of the angle of vessel in the juxtapapillary entrance, pigment changes, macular heterotropia, optic atrophy and optic disc cupping.

RESULTS: The median birth week of infants was 30(25-33) and median birth weight was 1300 (930-1930) gr. The median age at examination was 4 (2-12). Among children where visual acuity assessment was obtainable the median visual acuity was 0.85 (0.3-1.00) The most common observed retinal abnormality was abnormal branching of retinal vessels (82.4%)(n=14) followed by retinal thinning (52.9%) (n=9). 18% of infants (n=6) had esotropia and 12% (n=2) had exotropia. The rate of optic atrophy or nystagmus was 5.9%(n=1).

CONCLUSIONS: Cryotherapy has similar results to previously reported laser photocoagulation treatment for retinopathy of prematurity.

TAKE HOME MESSAGE: In less developed countries the access to cryotherapy compared to laser is greater. Cryotherapy may be used as a secondary treatment modality for retinopathy of prematurity, as the visual acuity results and anatomic results are similar to previously reported results of laser treatment.

O -18

My Way of Intravitreal Bevacizumab Treatment for Retinopathy of Prematurity

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Purpose: The purpose of this study is to evaluate the outcomes of intravitreal bevacizumab injection for specific retinopathy of prematurity (ROP) cases.

Effectiveness: ROP cases with immature macula who needed treatment were included. Twenty-five eyes of 14 patients who received 0.5mg/0.02ml bevacizumab intravitreally from June 2011 to February 2012 were retrospectively enrolled. Informed consent was obtained form all families. Mean gestational age was 29 weeks (26-31 weeks). Mean gestational age at the time of injection was 35 weeks (32- 37 weeks). Mean follow-up time was 16 months (12- 30 months). Twelve eyes had zone I plus disease, 8 eyes had zone I neovascularization and 5 eyes had zone II stage 3 with plus disease. Macula was immature with incomplete vascularization in all eyes. Two eyes needed additional laser photocoagulation. ROP regressed in 17 eyes without further treatment and development of normal retinal vascularization was observed during the follow-up period. 8 eyes had incomplete retinal vascularization at zone II and III without any sign of activity.

My Way: In my way of treating ROP it is important to save macula. Laser treatment is a threat to macula in cases with immature retinal vascularization at macular region. In these cases the use of 0.5mg/0.02ml bevacizumab is effective with careful postoperative follow-up.

Tips and Tricks: Intravitreal injection of bevacizumab can be done in neonatal unit under local anesthesia with the help of sedation. After careful preperation of injection site with betadine, injection can be done safely 1 mm posterior to limbus. Cleaning betadine from ocular surface with saline before injection is important to avoid toxicity. Postoperative antibiotic regimen is important to avoid infectious complications.

Conclusion: Intravitreal bevacizumab injection for selected cases of ROP is an effective treatment regiment. Incomplete vascularization during the follow-up period seems to be a major problem. Ocular and systemic complications should be evaluated with long term clinical studies.

Take Home Message: Aside from indications of intravitreal bevacizumab such as cases in which the surgeon is not able to perform laser for any reason including vitreous hemorrhage and nondilating pupil, intravitreal bevacizumab should also be considered in cases with immature macular vascularization to save the macula. Follow-up is very important in these cases considering the recurrences and delayed vascularization of retina.

O -19

Results of Vitreoretinal Surgery for Stage 4-5 Retinopathy of Prematurity

D Yalinbas, MC Ozmen*, HT Atalay*, S Ozdek**

* Gazi University, School of Medicine, Department of Ophthalmology

Purpose: The purpose of this study is to assess the anatomical success rates after vitreoretinal surgery for stage 4 and 5 retinopathy of prematurity (ROP).

Patients and methods: A retrospective review of charts of stage 4-5 ROP cases treated surgically between September 2010 and March 2014 at Gazi University Hospital Ophthalmology Department was done for the inclusion into the study. Those who had a minimum of 1 month follow-up were included in the study. Main outcome measure was anatomical retinal reattachment.

Results: A total of 93 eyes of 64 babies were found to have vitreoretinal surgery for stage 4 and 5 ROP. Mean gestational age was 28.4 weeks (23-30 weeks). Mean gestational age at the time of the surgery was 44.9 weeks (32- 84 weeks). Mean follow-up time was 5.6 months (3- 18 months). At the time of surgery 45 eyes (48.4%) were stage 4a, 19 eyes (20.5%) were stage 4b, 6 eyes (6.5%) were in stage 4b-5 and 17 eyes (18.3%) were in stage 5. Preoperatively 28 eyes (30%) had not received any treatment. 62 eyes (67%) had undergone laser photocoagulation before and 13 eyes (14%) had additional intravitreal bevacizumab injection. 19 eyes (20%) had received intravitreal bevacizumab injection 2 days before surgery for active disease as an adjuvant to the surgery. 54 eyes (58.1%) underwent lens sparing vitrectomy (LSV), 39 eyes (41.9%) underwent PPV and PPL. The anatomical success rate was 80% (65% being total reattachment and 15% partial reattachment) in stage 4a disease, 62.5% in stage 4b (43.75% total+ 18.75% partial) and 15.7% in stage 5 (0% total+ 15.7% partial). Postop vitreous hemorrhage was the most frequent complication occurring in 28 eyes (31%), 10 (36%) of which resolved spontaneously. 17 eyes (18.3%) required a second surgery following the primary surgery after a mean of 11.4 weeks (1-52 weeks). Formation of iatrogenic retinal break was seen in 16 eyes (17.2%) during surgery which caused a failure of retinal reattachment in 14 of the eyes.

Conclusion: LSV for stage 4a ROP gives a good chance of anatomical success rates reaching 80% in our series. Iatrogenic retinal break is the most dreadful complication leading to failure and occurrence of postoperative hemorrhage is another bad prognostic sign necessitating a second surgery and preventing retinal reattachment.

O -20

Surgery for persistent fetal vasculature syndrome: When and how?

Şengül Özdek, Miraç A. Yavruoğlu, H. Baran Özdemir, H. Tuğba Atalay

Insitution: Gazi University Medical Faculty Ophthalmology Department

Purpose: To evaluate the clinical characteristics of patients with persistent fetal vasculature (PFV) and the outcome of surgery

Effectiveness: In this study, we had favorable anatomical success rates following vitreoretinal surgery for PFV syndrome with appropriate timing and surgical approach.

My way: Pars plicata lensectomy together with limited vitrectomy and cautery of the persistant hyaloidal vessels was the surgical technique in anterior PFV. Lens sparing vitrectomy (when possible) with membrane peeling and fluid-air exchange was the surgical technique in posterior PFV. Combined lensectomy and vitrectomy with membrane peeling and fluid air exchange was done in combined cases.

Tips and tricks: Postop occlusion treatment and aphakia rehabilitation is important for functional success.

Conclusions: These results suggest that good anatomical and acceptable visual outcomes can be obtained in eyes with PFV following surgery.

O -21

Complications of Phacoemulsification Cataract Surgery Performed by Senior Residents

R Ober

University of Arizona

The purpose of this study was to document the complication rate of cataract surgery performed by senior residents in training to assess whether or not our complication rate was acceptable and to collect data to assist our Department in evaluating our resident surgical training program. Patients undergoing phacoemulsification cataract surgery by senior residents, as primary surgeons, between July 2001 and June 2011 were identified. A respective review of 3,721 consecutive cataract surgeries identified 2,506 (67%) cases performed by senior residents; whereas 1,215 cases (33%) were performed by attending surgeons, and were excluded from the study. Operative reports available in an electronic medical record system were reviewed for major and minor intraoperative complications. This presentation will review the preliminary results of the major intraoperative complications focusing on rupture of the posterior capsule with and without vitreous loss, and retained lens fragments in the vitreous cavity. One hundred thirty-five patients (5.4%) had a posterior capsular tear; 87 (3.5%) of these patients had vitreous loss and 43 (1.7%) had no vitreous loss. It was uncertain in 5 (0.2%) patients whether or not there was vitreous loss. In 9 (0.4%) patients, the surgery was converted to extracapsular cataract surgery. Retained lens fragments were noted in 40 (1.6%) patients. Sixteen (0.6%) patients required a pars plana vitrectomy. Four (0.2%) patients had immediate surgery and 12 (0.5%) had delayed surgery. The management of retained lens remnants will be discussed. A review of the literature showed that our complication rate of posterior capsular rupture with and without vitreous loss was comparable to rates published by other ophthalmology residency training programs in the United States. Despite this favorable complication rate, our Department continues to strive to improve our residency surgical training program with the goal to limit the occurrence of capsular rupture by resident surgeons in training. The curriculum of our resident cataract surgery training program will be briefly discussed, including those efforts for continued improvement.

O -22

Different strategies in IOL dislocations

Levent Karabaş

O -23

Re-usable scleral fixated IOLs

Stratos Gotzaridis MD

Athens Retina Institute

The purpose of this study is to evaluate the safety and efficacy of re-using the dislocated IOLs in pseudophakic eyes.

Thirty eyes of 29 patients underwent PPV and scleral fixated IOL due to dislocation of the already implanted IOL. All eyes (30) had undergone Cataract extraction 4 to 15 years before.

Three eyes had been implanted with one piece-IOL which was successfully fixated in the sclera? ???(in the first op??)

Conclusion:

Using the same dislocated IOL in a scleral fixated manner is an applicable technique which avoids the large corneal insisions, decreases the post operative inflammation and reduces the cost of the operation.

O -24

Chopping Dropped Nucleus with a New Intraocular Forceps During Pars Plana Vitrectomy

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World Eye Hospital, Etiler, Istanbul, Turkey

Dropped nucleus can be removed with pars plana vitrectomy using different methods. Small gauge vitrectomes can cut smaller nuclues particles as well as cortical pieces, whereas endophacofragmatome can effectively clear hard nucleus. On the other hand it must be avoided not to use it in remaining vitreous gel not to perform traction and retinal tears. Heavy liquids can also be used to lift the nuclues.

In this presentation a new intraocular foreign body forceps is shown to chop a hard nucleus that could not be cut with an ocutome. Totally dropped nucleus was too hard to be cut with a 23G,or a 20-G cutter, and phacofragmatome was unavailable at hand. New designed 20-G IOFB forceps was used to chop the nucleus, and the pieces were removed with vitrectomy successfully. This forceps can also be an option in lens dislocations in selected eyes especially when a endophacofragmatome is not available.

O -25

Treating Choroidal Effusion Syndrome

G Pappas, A Angelakis

Venizeleio Hospital of Heraklion

I am presenting my experience in treating Choroidal Effusion Syndrome

O -26

Analysis of development of Eye Ischemic Syndrome during the postoperative period

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Tashkent Institute of Postgraduate Medical Education

Purpose. Analysis of the mechanisms of development of ocular ischemic syndrome (OIS) after cataract phacoemulsification and antiglaucomatous surgery.

Material and methods. The study involved 12 patients aged 63 to 70 years. Of these 4 women, 8 men. In all patients was diagnosed OIS. This diagnosis was based on clinical data and the severe disruption of hemodynamic parameters in the main vessels of the eye.

All patients underwent a comprehensive eye examination: viziometry, tonometry, computerized perimetry, gonioscopy, biomicroscopy, ophthalmoscopy of the fundus. Of special methods of investigation conducted optical coherence tomography, ultrasound color Doppler mapping vessels of the eye, transcranial and brachiocephalic vessels. According to the testimony examined magnetic - resonance imaging. Patients were consulted cardiologist, neurologist and angiosurgeon.

Results. In 7 patients was performed cataract phacoemulsification, in 5 patients - antiglaucomatous surgery. In all cases surgery went without complications. In 4 patients across 10 - 12 days after surgery developed OIS, at 3 within 20-22 days, in 5 patients within 1 month after surgery was diagnosed OIS.

In the investigation: visual acuity on average - 6/60; IOP 18,6 ± 1,97 mm Hg; the anterior segment of the eye - diffuse episcleral injection - 5 patients, ischemic angiopathy of limb - 7, corneal edema - 9, turbid aqueous humor – 7, small cellular reaction – 3, sluggish pupillary reaction – 11, iris atrophy in 10 patients.

Fundus: the optic disc - pale, edematous, indistinct borders, in the field of peripapillary edema and microhemorrhages in all patients, spontaneous pulsation in 8 patients, cotton-like lesions on the retina: small - in 6 patients, medium size - in 4, out - 2 patients. Macular edema was observed in 9 patients.

At Doppler were registered hemodynamically significant asymmetry blood flow parameters: brachiocephalic arteries - 7 patients; ophthalmic artery - 9; back short ciliary artery - 6 patients.

Conclusion.Hemodynamically significant changes in the main vessels of the brachiocephalic trunk and eyes caused the development of ocular ischemic syndrome in these patients after cataract phacoemulsification and antiglaucomatous surgery.

Considering the above, before penetrating operations, causing changes in the perfusion pressure of the optic nerve should be a comprehensive examination patients, including Doppler the main vessels of the brachiocephalic trunk and eyes.

O -27

Inferior Retinectomy for the Treatment of Refractory Glaucoma due to Retinal Vascular Disease

Cengiz Aras

Purpose; to report on clinical and surgical outcomes of cases underwent inferior retinectomy for the treatment of refractory glaucoma due to retinal vascular diseases.

Methods, Three patients with refractory neovascular glaucoma that developed underwent pars plana vitrectomy, inferior retinectomy that covered the area anterior to equator, and silicone oil injection.

Results; Mean age patients were 67.1 years. Refractory glaucoma developed due to central retinal occlusion in 1 eye, central retinal artery occlusion in 1 eye, proliferative diabetic retinopathy in 1 eye. Preoperative visual acuity was no light perception in 2 patients and light perception only in one eye. Two patients were pseudophakic and one eye underwent lens extraction wth intraocular lens implantation during vitrectomy. Inferior retinectomy was achieved intraoperatively in all eyes. Postoperative mean follow up time was 3,8 months. Mean baseline intraocular pressure was 42 mmHg, it was 12 mmHg at first month, 11mmHg at 3. month. All the patients stopped using anti-glaucoma medication at postoperative 3. month.

Conclusion; Inferior retinectomy may be effective for the treatment of refractory glaucoma due to retinal vascular occlusion. It needs to be studied in larger case series.

O -28

Postraumatic suprachoroidal haemorrhages after blunt trauma in previous PK: overcoming a Taboo

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The cornea transplantation represents for the ocular bulb the weak point. It continues for years and in case of closed trauma the opening is always at the level of the corneal suture.

The immediate rupture of the corneal suture brings, in almost all cases, after a severe trauma, an expulsion of the ocular content (Iris, lens, IOL and choroidal haemorrage). The case shows a new strategy in order to obtain the best result in the fewer number of surgeries, considering the treatment of various damaged factors. The choroidal serum-haemorragic detachment is caused, above all, by the acute hypotonia, due to an immediate and massive opening of the inferior cornea. Besides the haemorragic aspect, there is also the exudative component. The choroidal detachment, after a closed trauma in previous PK has a higher rate of exudative and haemorragic detachment. That could bring to an early intervention to drainage the SCH with more success also in short time. The case shows an immediate approach after 7 days of the trauma, closed as first instance at the corneal level, to try a complete treatment. After the MIVS infusion in the interior chamber, the serum is drained with transconjuntival Trocar MIVS 23G. At this point what to do? There was retinal detachment, corneal opacity and iris incarceration. The best way is opening and change the corneal opacity and using an open sky to remove inrcarceration. So there is a taboo to overcome: Is it possible to remove the cornea after a closed trauma with serum-haemorragic detachment avoiding haemorragic recurrence? The video shows that the surgeon decides to open the eye, removing the cornea and open sky removal of the vitreous traction on the injury. In this way, it's possible to free the incarcerated iris wit the vitreous and cleaning the anterior part of the vitreous. Subsequently the vitrectomy is finished thanks to TKP, and IOL retropupillary implant in open sky is made. The final tamponade is made with IOL silicone, which offers various advantages, among them major compliance for the patient who can be flat on his back, and reduce the risk of secondary glaucoma. The video presentation shows the overcoming of the taboo of opening immediately the traumatized eye. It offers new therapeutic chances to treat the complications obtaining the best result in short time avoiding the risks listed by the litterature.

O -29

Vitreoretinal Surgery with Temporary Keratoprosthesis and Iris Retention Sutures for Combined Eye Trauma

Ziya Kapran

Severely traumatized eyes deserve surgical exploration with direct visualization of the posterior segment. Temporary keratoprosthesis (TKP) provides excellent view to allow performing timely reconstructive surgery on eyes with severe combined anterior and posterior segment trauma. Unfortunately many of severely injured eyes are still enucleated. In this video our aim to show the treatment of severe ocular injuries of anterior and posterior segments with temporary keratoprosthesis and vitrectomy and iris retention sutures, in severe eye injuries. Combined surgeries of anterior and posterior ocular segments are an effective method for treatment for severe ocular injuries.

O -30

Outcome of Vitrectomy for Suprachoroideal Hemorrhage

Justus G. Garweg, **, Martin Landolt***, Markus Halberstadt***

Swiss Eye Institute, Rotkreuz, Switzerland* Berner Augenklinik am Lindenhofspital, Bern, Switzerland** Private Practice, Rüti, Switzerland***

Background: Suprachoroideal hemorrhage leading to kissing choroids and eventually extrusion of intraocular tissues is a rare complication of intraocular surgery with an incidence of 0.04% in cataract surgery, 0.15% in trabeculectomy, 0.41% after vitrectomy, and 0.45% in penetrating keratoplasty. Etiologically, a low intraocular pressure presumably induces intercellular effusion primarily into the choroid, expanding secondarily into the suprachoroideal space. The separation of the choroid from the underlaying sclera results in rupture of posterio ciliary vessels in predisposed patients with usually poor to very poor functional outcomes. Herein, we present the results of an own series treated during the last 18 years. Patients: This series refers to 45 consecutive patients referred for vitrectomy after expulse choroideal hemorrhage. From all patients, demographic data and risk factors were documented. The clinical outcome after a follow up of minimally 6 months after last surgery was documented for 36 of them.

Results: After an average of 2.6 surgeries per eye, two eyes had been enucleated, five achieved light perception only, another 14 eyes peripheral vision (VA <10/200). 12 eyes had a final visual acuity above 10/200, 3 eyes 10/20 or better. Hypotony was present in 12 patients, IOP between 8 -20mmHg in 21 patients and medically not sufficiently controled IOP in 1 eye.

Conclusion: The surgical treatment of this unfavourable situation resulted in a useful visual function (>20/200) in 32% of eyes and absence of complaints in 89% which clearly exceeds the outcomes of published series. These results justify the attempt for a surgical restoration of vision in the majority of cases in this situation.

O -31

Post-Traumatic Aniridia: The United Colors of The Artificial Iris.

Cesare Forlini, Matteo Forlini

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Purpose: Nearby cosmetic IOL and pupillary reconstruction, the artificial iris is a better solution. We show our strategy to suture a foldable IOL on the back surface of the artificial iris to achieve a cosmetic and refractive result on postraumatic aniridia

Setting/Venue: Department of Ophthalmology, Hospital S. Maria delle Croci, Ravenna, Italy

Methods: we reviewed some eyes with combined anterior and posterior segment injuries. Open-sky surgery technique and mini-invasive 25/23G system was used to repair ocular injuries, necessitating the use of TKP for exploration and reconstruction. But, at the end, the iris was too much destroyed for reconstruction. So, after 3 months, we performed artificial iris implantation with intraocular foldable lens suturing at the artificial iris

Results: In these cases with posttraumatic aniridia, the artificial iris with intraocular lens was stable

Conclusions:In the case of posttraumatic aniridia, the artificial iris with suturing IOL on the back surface of the artificial iris is the gold standard for obtaining a good result anatomical, functional and aesthetic.

O -32

Iris reconstruction surgery

Levent Karabaş

O -33

The Use of Continuous Silicone Oil Infusion as Preoperative Tool in a Severely Traumatized Eye

Ziya Kapran

We introduce the use of low molecular weight silicone oil as an infusion an as a peroperative tool to facilitate in a severely traumatized eye after blast injury. The patient had total retinal detachment and foreign body which was 12 mm size. The preoperative visual acuity was light perception without projection. After removal of foreign body massive hemorrhage occurred which was precluding next surgical steps.

Silicone oil is a polymer of dimethylsiloxane. The higher the molecular weight the greater shear viscosity of the fluid. Conversely when the molecular weight is sufficiently low, it is possible to produce a fluid that is water like. We used silicone oil with a shear viscosity of 5 m Pas. This was designed as a peroperative tool to be used as an infusion in place of balanced salt solution. This solution was used for retinal detachment surgery for break detection and vitreous base shaving.

Overall, we were greatly encouraged by the performance of the infusion in severely traumatized eye. We conclude that silicone infusion was very helpful for hemorrhage control, vitreous removal, break detection and retinal attachment.

O -34

Bimanual removal of large foreign bodies with the use of a suture loop, and a new designed foreign body forceps

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Intaocular foreign bodies (IOFB) can present in various shapes and sizes. Several instruments available can be sometimes limited. In this presentation a suture loop consisting of a 20-gauge angiocatheter and 6-0 polypropylene suture is shown. Its construction is very simple. Also a new designed IOFB forceps is demonstrated. This suture loop effectively grasps large IOFBs, both metallic and nonmetallic. The use of bimanual technique in which the IOFB is surrounded with the suture loop with a forceps provides better control, enables the surgeon to place the suture loop along the desired axis of the IOFB, so it can be removed through a shorter incision. This may decrease surgical trauma at the incision site. The new designed forceps adds additional control and safety for the surgeon. Bimanual maneover is yet gives more control. The IOFB forceps grasps tightly of any kind of IOFB avoiding the risk of falling back of the IOFB into eye during its removal.

O -35

Case report: Subretinal hunting bullet

Cesare Forlini, Matteo Forlini

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It's a high risk removal. At the end with a specific claw it seemed all done, but "don't count your chickens before they are hatched!!". If you loose the bullet while it's removed from the scleral it's a very seroius situation. A hunting bullet doesn't spare the macula. The case shows how also an expert surgeons risks to loose the bullet and create a damage on a well done surgery.

O -36

Outcomes of vitrectomy with temporary keratoprosthesis or endoscopy in combat ocular trauma

A. Hakan Durukan, Cüneyt Erdurman, Güngör Sobacı

OBJECTIVE: To demonstrate the outcomes of vitrectomy with temporary keratoprosthesis or endoscopy in combat ocular trauma.

PATIENTS AND METHODS:

This retrospective study included 14 eyes of 14 patients who underwent vitrectomy with temporary keratoprosthesis or endoscopy at Gulhane Military Medical Academy, Turkey between 2007 and 2013.

RESULTS: A temporary keratoprosthesis was used in 8 eyes (57%) and endoscopy in 6 eyes (43%). The median age was 24+/-6 years (range, 18-41 years). The trauma type was open globe injury in all eyes. The most common cause of injury was the improvised explosive device (IED), which caused 81% of all injuries. After surgery, final visual acuity of 0,1 (Snellen) or better was achieved in 6 eyes (43%), while 8 eyes (57%) had visual acuity less than 20/200 (poor visual outcome).

CONCLUSION: Vitrectomy assisted by combined endoscopy or temporary keratoprosthesis could be advantageous in managing visualization constraints due to combat ocular trauma.

O -37

SEVERE OCULAR TRAUMA: The use of temporary keratoprosthesis in the "pole to pole "surgery.

Matteo Forlini, Cesare Forlini

Department of Ophthalmology, Hospital S. Maria delle Croci, Ravenna, Italy.

PURPOSE: to show the use of temporary keratoprosthesis (TKP, Landers) to visualization of intraocular structures during pars plana vitrectomy in eyes with corneal and retinal pathologies and makes it possible to manage the both in a single surgical procedure.

METHODS: we reviewed some eyes with combined anterior and posterior segment injuries necessitating use of TKP for exploration and reconstruction. TKP was used to intraoperatively replace the opaque cornea. We use 25G anterior chamber infusion and mini-invasive 25/23G system. The corneal button was trephined followed by the anterior segment reconstruction and open sky vitrectomy. A TKP was placed and permits viewing of both the posterior pole and peripheral retina without/with contact lenses. At the end extensive laser treatment was given in the periphery and silicone oil fill was performed. The TKP was removed and corneal graft was placed.

RESULTS: the functional improvement in this eyes is usually low; the use of TKP in this cases gives a chance to the patients to obtain a useful visual acuity.

CONCLUSIONS: the use of TKP allows to manage the penetrating keratoplasty and the vitrectomy in the same surgical procedure and allows also a “pole to pole” surgery.

O -38

A case with traumatic subretinal hemorrhage

Levent Karabaş

O -39

Management of Neovascular AMD With PED

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Retinal pigment epithelial detachment (PED) is an important predictor of vision loss in patients with age related macular degeneration (AMD). In patients with AMD four main types of PEDs are identified: drusenoid, serous, fibrovascular, and hemorrhagic. Each type has distinct characteristics on ophthalmoscopic examination, angiography, and optical coherence tomography (OCT). The advent of anti-vascular endothelial growth factor (VEGF) therapy improved the visual outcome for many forms of neovascular AMD; however, cases with PEDs are often resistant to most therapeutic options. Retinal pigment epithelial tears can develop both in natural course and with treatment, limiting the vision. Data belonging to 52 eyes of 50 patients from our center with PED secondary to AMD treated with intravitreal injections of bevacizumab and/or ranibizumab according to a PRN regimen with monthly follow-up for a mean of 25 months will be presented. In our cohort, mean best corrected visual acuity (BCVA) did not change much from 45.29±18.46 letters at baseline to 44.38±21.50 letters at final follow-up. The mean number of injections was 5.79±4.28 (range: 1-16). Thirty three eyes received ranibizumab only, 9 bevacizumab only, 8 received bevacizumab then ranibizumab when it became reimbursed. The BCVA remained stable (within 5 letters) or increased in 34 eyes (65.38%), with an increase at least 15 letters in 9 eyes (17.03%). Fourteen eyes (26.92%) lost 15 letters or more, four of them more than 30 letters. PED flattened completely in 7 eyes (13.47%). Five eyes (9.6%) developed RPE tear, 5 eyes (9.6%) ended in geographic atrophy and 3 eyes (5.8%) developed disciform scars. No systemic side effect was encountered. In conclusion intravitreal anti-VEGF therapy with a PRN regimen helped PED to remain stable, but tears, scars and geographic atrophy were unavoidable.

O -40

Lack of basic epidemiological data and power calculations in published Anti-VEGF randomized controlled trials

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Purpose: We had the observation that some of the articles including randomized controlled trials (RCT) were not reporting power calculations, essential to assess the possibility of false negativity. The purpose of this work was to survey methodological limitations in Anti-VEGF RCTs.

Material and Methods: We did a PubMed search with the term "bevacizumab OR ranibizumab OR pegaptanib OR aflibercept" and limitations "Humans" and "Randomized Controlled Trials" in 15 highest impact factor general medicine and ophthalmology journals on December 9th 2013, without any time limitation. We only included RCTs published as an original article, where an Anti-VEGF was used to treat eye disease. Two independent observers (OA, PK), read through each article and classified the articles according to the studied drug, studied disease, route of administration, presence of gender data, age data, power calculation for efficacy, power calculation for safety and negative results. In the analysis, the two authors solved their disagreements by discussion (3.0% of the cases). When an agreement could not be reached, a third author (FE) made the final classification (0.8% of the cases).

Results: The PubMed search yielded 209 articles and, 93 articles were classified as eligible. Most of the studies were on age related macular degeneration (40.8%, n=38), followed by diabetic retinopathy (30.1%, n=28) and retinal vein occlusion (13.9%, n=13). In most of the studies, study drug was bevacizumab (52.6%, n=49), followed by ranibizumab (44.1%, n=41), pegaptanib (7.5%, n=7) and aflibercept (5.4%, n=5). Most commonly studied route was intravitreal (96.7%, n=90) followed by subconjunctival (2.2%, n=2) and systemic (1.1%, n=1). Some basic epidemiological data (gender or age) was missing in %3.2 of the published RCTs. Power calculation for efficacy was mentioned in 49% (n=46) of the published work and a power calculation for safety was considered in only one study (1.1%). Only 6 RCTs (6.5%) reported negative results.

Conclusions: Power calculations for efficacy, an important component of a RCT was missing in 51% of the RCTs we surveyed, while a power calculation for safety was only present in 1.1%. It was also interesting to note that the most commonly studied drug (bevacizumab) remained as the only off-label anti-VEGF used for eye disease.

O -41

Tachyphylaxis During Ranibizumab Treatment Of Exudative ARMD

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Purpose: To determine the rate of tachyphylaxis during ranibizumab therapy for exudative age-related macular degeneration (AMD).

Methods: The records of patients treated with ranibizumab were retrospectively reviewed. Tachyphylaxis was defined as an initial good response to ranibizumab followed by a decrease or absence in the response to ranibizumab despite a minimum of two injections during follow-up in patients with exudative age-related macular degeneration (AMD).

Results: Of 206 eyes, 16 (7.7%) had tachyphylaxis. The median number of injections before tachyphylaxis was 3.5 (2-16). The median best corrected visual acuity (BCVA) was 0.80 (0.4-1.4) logMAR at baseline, 0.45 (0.1-1) at the last visit before tachyphylaxis, 0.65 (0.1-1) at the time tachyphylaxis developed, and 0.85 (0.5-1) at the last visit. The median central retinal thickness (CRT) was 325 (224-609) μm at baseline, 150 (120-320) μm at the last visit before tachyphylaxis, 200.5 (130-380) μm at the time tachyphylaxis developed, and 227 (180-325) μm at the last visit. The median PED height (n=9) was 384 (80-850) μm at baseline, 0 (0-240) μm at the last visit before tachyphylaxis, 80 (0-580) μm at the time tachyphylaxis developed, and 192 (70-311) μm at the last visit.

Conclusions: Tachyphylaxis can occur in 7.7% of eyes after a mean number of 3.5 injections during the treatment of exudative AMD with ranibizumab.

O -42

My way in anti- VEGF non- responders

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PURPOSE: 44-81% patients do not respond as expected to anti- VEGF therapy. The aim of this study is to report on either switching to aflibercept or injecting double dose of bevacizumab in anti- VEGF non- responders.

EFFECTIVENESS/ MY WAY: A retrospective study of 2400 patients treated with anti-VEGF. Non- reposders were selected. Spectral domain optical coherence tomography (SD-OCT) was performed monthly. Visual acuity, central retinal thickness and photoreceptor defects were evaluated. The main outcome measure was visual and anatomical outcome one and six months after aflibercept or double- does bevacizumab werfe administered.

TIPS AND TRICKS: In 2400 eyes 98 were diagnosed as non- responders (persistant intra- or subretinal fluid despite monthly anti- VEGF treatment). 78 eyes received a double dose of bevacizumab and 22 were switched to aflibercept. Visual acuity significantly improved (p=0.01) after the switch to aflibercept (from 0.39 to 0.5 Snellen) or to double dose of bevacizumab (from 0.35 to 0.41 Snellen). This improvement was stable until month 6 later (Final visual acuity: 0.5 Snellen in aflibercept group and).

Central retinal thickness decreased from 521µm to 446µm (p=0.01) and remained stable until month 13 (CRT: 452µm) after switching to aflibercept and decreased from 512 µm to 462 µm in the double dose group.

CONCLUSIONS/ TAKE HOME MESSAGE: In bevacizumab non- responders a switch to a single dose of aflibercept with continuing the therapy with bevacizumab improves as well visual outcome as anatomic results. Addtionally, increasing the dose of bevacizumab improves functional and anatomical results.

O -43

The Use of Aflibercept in resistant AMD cases

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We are presenting out experience of Aflibercept use in AMD cases where Ranibizumab and Bevacuzumam were unsuccessful to treat

O -44

Strategies for Limited Submacular Hemorrhage Management

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Purpose: to describe different surgical management strategies for limited submacular hemorrhage.

Methods: Records of patients with limited submacular hemorrhage were reviewed for the applied treatment strategy and the results of the treatment retrospectively.

Results: 8 Patients were treated with intravitreal SF6 gas + tPA + anti-VEGF injection followed by face down position for 7 days. One patient was treated with PPV + subretinal tPA+ Gas. Visual acuity increased 3 lines or more in 6 of these eyes during follow up.

Take home message: Patients with limited submacular hemorrhage can effectively treated with intravitreal SF6 gas + tPA + anti-VEGF injection followed by face down position or PPV+subretinal tPA+gas surgery.

O 45

"Surgical Management of non responding to anti-VGEF wet / haemorrhagic AMD"

Stratos Gotzaridis MD

Athens Retina Institute

Age-related macular degeneration is the first cause of blindness in the developed world. The use of Anti-VGEF medicines restricted the rates of blindness about 50%. However, difficult cases which do not respond to treatment end up to subretinal blood, vitreous blood as well as creation of scar tissue in macular area. Surgical techniques are able to improve the condition of these complicated cases.

O -46

PEDUNCULATED choroidal – RPE patch transplantation in severe neovascular macular degeneration

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Purpose: To perform an autologous RPE graft in a case of fibrotic CNV leaving a link between the patch and the original site of it.

Setting: Department of Ophthalmology, Hospital S. Maria delle Croci, Ravenna, Italy

Methods: Standard vitrectomy with induction of retinal detachment and retinectomy of the 180° temporal retina; removal of fibrotic subfoveal fibrotic membrane, preparation of a choroidal patch to move on the macular area leaving a part connected with the original site of choroid.

Results: At the follow-up the patient had the patch in the right position, and autoforescent, but OCT revealed dome shaped and wrinkling of FTPA. At two weeks follow up the patient had complete revascularization on angiogram and some subretinal fluid at the margin of the patch with persistence of wrinkling of FTPA. At three months follow up the situation remained unchanged.

O -47

The use of chandelier endoilluminator during the surgical scleral buckling approach for the repair of retinal detachment

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PURPOSE: To evaluate the advantages and safety of the use of chandelier endoilluminator during episcleral surgery for the treatment of retinal detachment.

EFFECTIVENESS: The use of chandelier endoilluminator allows the surgeon to observe the fundus to locate the retinal breaks and retinal regmatogenous areas faster and with better quality than the traditional technique of visualization with an indirect ophthalmoscope. The observation with the chandelier endoilluminator and the use of the surgical microscope allows the surgeon to perform the manoeuvres of localization of retinal breaks and to perform cryopexy without holding the lens. The observation of the fundus is easier than with the indirect ophthalmoscope because the image is not inverted and makes the manoeuvres of scleral indentation more intuitive.

MY WAY: The technique of the scleral buckling is identical to the traditional technique reported in the literature and commonly performed. The chandelier endoilluminator is positioned after a conjunctival perilimbar incision is made and after hooking the extraocular muscles and threading the silk sutures. Either a 25 gauge chandelier trocar insertion or a 27 gauge chandelier with a needle guide were used.

TIPS AND TRICKS: The observation of the fundus is performed at the surgical microscope with no contact wide-field lens. The traction sutures on the insertions of the extraocular muscles allow the surgeon to visualize the periphery of the retina and to keep the eye still during cryopexy of retinal breaks.

CONCLUSIONS: The hands free, the clearer visualization of the fundus and the non reversed image are the advantages for the use of the chandelier endolluminator. This additional light instrument makes episcleral surgery faster and more accurated compared to the traditional tecnicque. The use of the endoilluminator chandelier did not cause iatrogenic breaks where it was inserted.

TAKE HOME MESSAGE: The use of the chandelier endoilluminator during episcleral surgery facilitates the localization and treatment of retinal breaks.

O -48

Peripheral Vitrectomy Under Air in Rhegmatogenous Retinal Detachment

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Purpose: To evaluate the results of pars plana vitrectomy with peripheral vitreous shaving under air in eyes with rhegmatogenous retinal detachment (RRD).

Patients and Methods: Fourty two eyes of 42 consecutive patients with RRD were included in the study. All patients underwent 23G pars plana vitrectomy. Phakic patients underwent phacoemulsification and intraocular lens implantation at the same setting if they are in the presbyopic age, or they have a high refractive error. Following central vitrectomy and removal of anterior hyaloid perfluorodecaline was injected if there was Grade C PVR, if the detachment was bullous, or if the macula was completely detached. Following heavy perfluorocarbon liquid injection vitrectomy was performed up to the vitreous base. Anterior subretinal fluid was drained via existing holes and perfluorodecaline was removed with fluid-air exchange. Subretinal fluid was drained from posterior drainage retinotomy under air in surgeries without perfluorodecaline use. Vitreous base shaving was made under air in all eyes up to just anterior to ora serrata.

Results: Fifteen woman and 27 man was included in the study. Twelve of 19 phakic eyes underwent phacoemulsification and lens implantation at the same setting. Patients were followed for 6.5±4 months. Only 5 eyes had Grade C PVR. Perfluorodecaline was used in 13 (31%) eyes peroperatively. Silicone oil was used as tamponade in 19 eyes, and C3F8 gas was used in the remaining 23 eyes. Redetachment was developed in 4 (9.5%) eyes. Redetachment was due to anterior PVR in 2 cases and was related to drainage retinotomy in the other 2 cases. Complete reattachment was obtained in 3 of these cases and shallow detachment anterior to the equator persisted in the other case after repeat surgeries. Accidental peripheral holes was created in 2 eyes peroperatively. Increased IOP was detected in 5 eyes, and fibrin reaction developed in 3 eyes postoperatively.

Conclusion: Vitreous base shaving under air in eyes with retinal detachment is a safe and effective method. It has a high success and low complication rate. Scleral indentation is not necessary during surgery. It also decreases the need for heavy perfluorocarbon fluid use and the disadvantages due to its use.

O -49

Pneumatic retinopexy in big tears

Gürsel Yılmaz

O -50

Long-term Surgical Results of Retinal Detachment due to Acute Retinal Necrosis

Cengiz Aras

Purpose: to present long term clinical results of retinal detachment associated with acute retinal necrosis treated by pars plana vitrectomy and silicone oil injection

Settings; Department of Ophthalmology of Cerrahpasa Medical School of Istanbul University and Dunya Eye Hospital

Materials and Methods; Sixteen eyes of 15 cases with complicated retinal detachment associated with acute retinal necrosis underwent cataract extraction with phacoemulsification combined with intraocular lens implantation, pars plana vitrectomy and silicone oil injection. Necrotic retinal areas was debrided with retinectomy to the border of healthy retina.

Results; Mean age of patients was 41,6 years. Mean follow up time was 2.53 years ranging from 6 months to 5 years. Mean visual acuity was 0.14 at postoperative period. Etiology for acute retinal necrosis was Varicella Zoster in 13 eyes and Herpes Simplex type 1 in 3 eyes. Retinal reattachment were achieved intraoperatively in all cases. Silicone oil was removed from 15 eyes 3 months after surgery.Retina was attached in 14 eyes at the end of follow up time. Retinal detachment recurred in 2 eyes after silicone oil removal and developed phitisis bulbi in spite of reoperation. One eye developed progressive corneal opacification.

Conclusion; Vitrectomy and silicone oil injection is an effective approach in complicated retinal detachment associated with acute retinal necrosis and gives stable results in long - term

O -51

Scleral Buckle: an important and overlooked procedure in retinal detachment repair surgery allowing for the most rapid visual and functional recovery

Author (s): Vincent Reppucci

Purpose: To underscore the effectiiveness and the rapid post procedure recovery of visual and activity function following scleral buckle repair of retinal detachment.

Effectiveness: Retinal detachment repair approaches 95% without the head positioning requirements or visual impairments; i.e. cataract formation, etc of post vitrectomy tamponade agents gas or si oil.

Conclusions: Localized scleral buckle can be a useful tool in the modern vitreoretinal surgeon's armamentarium.

Take Home Messagge: For phakic active patients with an acute retinal detachment, consider a localized scleral buckle as your first choice in retinal detachment repair surgery. Evene in complicated surgical cases post vitrectomy localized scleral buckles can be very useful.

MY WAY - Tips and Tricks: In select cases, localized scleral buckling allows for rapid, often within 24-48 hrs, resumption of a patient's visual function and activity level unequaled by pneumatic or pars plana vitrectomy. Case selection, localization, and understanding of mechanism of retinal detachment is key. Drainage of subretinal fluid is not required.

O -52

Subfoveal choroidal thickness after scleral buckling surgery with and without encircling band for macula-off rhegmatogenous retinal detachment in long-term observations.

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Purpose: To determine the influence of the extent of scleral buckling on subfoveal choroidal thickness several months after successful surgery for macula-off rhegmatogenous retinal detachment.

Methods: Retrospective review included: Group A, 48 patients (48 consecutive eyes) who had undergone scleral buckling with encircling band surgery and Group B, 17 patients (17 consecutive eyes) who had undergone segmental scleral buckling without an encircling band to repair for unilateral rhegmatogenous retinal detachment (RRD).

Results: The subfoveal choroidal thickness of eyes after scleral buckling surgery with encircling band in long-term EDI-OCT examination was significantly thicker (260,9 ± 45,8 μm, $p<0.05$) than in eyes after scleral buckling surgery without encircling band (228,5 ± 22,6 μm).

Conclusions: The subfoveal choroid thickness of eyes after scleral buckling surgery using an encircling band was significantly thicker ($p=0.003$) than in eyes after segmental scleral buckling without encircling band in long-term observation. The width and size of the material used in scleral buckling surgery may affect a change in the choroid circulation, and may have influence on subfoveal choroidal thickness.

O -53

Blood-aqueous barrier breakdown and retinal detachment surgery: what relationship?

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Purpose: To investigate relationship between laser flare photometry values and anatomic outcome of rhegmatogenous retinal detachment surgery.

Methods: Sixty patients with unilateral rhegmatogenous retinal detachment were included in the study. Thirty nine were treated with scleral buckling, 16 with pars plana vitrectomy, and 5 with pneumatic retinopexy. All patients were examined preoperatively, and 1 day, 1 week, 2 weeks, 1 month, and 3 months after surgery. The anterior chamber inflammatory activity was evaluated using the laser flare photometry (Kowa FM-500; Kowa Company, Ltd, Tokyo, Japan) before and three months after surgery. The results are expressed in photon counts per millisecond (ph/ms).

Results: Mean preoperative flare was 34.25 +/- 55.33 ph/ms. Flare values increased according to the extent of retinal attachment (one quadrant = 20.3 ph/ms; four quadrants = 59.8 ph/ms (p=0.28)). Three months after surgery, mean aqueous flare in patients with complete retinal attachment (N=49) was 12.8 ph/ms versus 80.7 ph/ms in patients with persistent retinal detachment (N=11) (p=0.0001). No statistically significant difference was found between the different treatment procedures.

Conclusions: Our results show that the breakdown of the blood-ocular barrier as determined by aqueous flare is associated with increased risk for failure of retinal detachment surgery.

O -54

Choroidal thickness changes following retinal detachment and vitrectomy surgeries measured with EDI-OCT

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Abstract

Purpose: Enhanced depth imaging (EDI) optical coherence tomography (OCT) provides high-definition cross-sectional images of the choroid. Information on alterations in choroidal thickness (CT) after scleral buckling surgery (SBS) and pars plana vitretomy (PPV) are rare.

Methods: The medical charts of 44 patients (44 eyes) who underwent SBS versus PPV for macula-off rhegmatogenous retinal detachment (RRD) were retrospectively analysed. Patients with a follow-up ≥6 months were included. Postoperative EDI-OCT images concerning CT were evaluated 1 week, 1 month and 6 months postoperatively in 2 groups: group-1: cerclage + cryopexy + subretinal fluid drainage (SRD)+ SF6 or air (n = 28 eyes), group-2: PPV + laser photocoagulation + C3F8. Subfoveal CT was compared between the groups and with the non-operated fellow eye.

Results: Subfoveal CT in groups 1 and 2 was thicker 1 week postoperatively. There were no significant differences between the groups or when comparing the operated eye with the fellow eye 1 and 6 months postoperatively.

Conclusion: There were no differences in subfoveal CT 1 and 6 months after SBS between the eye with macula-off RRD and the fellow eye. Thicker CT 1 week postoperatively after SBS may most likely be induced by scleral buckle reduced blood flow and increased haemostasis in the choroidal circulation and by scleral and choroidal inflammation after cryopexie versus laser photocoagulation after SBS versus PPV.

O -55

SD-OCT study of persistent subretinal blebs after retinal detachment repair

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Purpose: To study morphology and etiology of persistent subretinal blebs after surgery for regmatogenous retinal detachment (RRD).

Materials and methods: 10 eyes of 10 patients presenting persistent subretinal blebs after surgery for RRD. All eyes received a complete ophthalmological examination inclusive of FAF, IR, SD-OCT and en face OCT (Spectralis).

Results: Multiple subretinal blebs were present in 100% of eyes. SD-OCT was able to differentiate subretinal blebs caused by persistent serous subretinal fluid, from subretinal blebs caused by entrapped subretinal prflurocarbon liquid (PFCL) in 100% of cases. Vitreo-retinal adhesion above the blebs was present in 40% of eyes, anatomic delineation of the area of subretinal blebs by the large retina vessels in 100% of cases, photoreceptor damage in the area of the bleb demonstrated by elongation of the photoreceptor outer segment (OS) and interruption in the inner segment / outer segment (IS/OS) line in 70% cases.

Conclusions: Persistent subretinal blebs after RRD surgery have been reported in 10% of cases. SD-OCT study allows a better definition of the extension of the subretinal blebs, of the presence of photoreceptors damage, and of the presence of vitreo-retinal adhesion / traction above the blebs.

O -56

Analysis of the time and location of the silicone oil emulsification by spectral-domain optical coherence tomography after silicone oil tamponade.

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Purpose: To estimate localization and the period up to the appearance of small hyperreflective round shaped droplets using spectral-domain optical coherence tomography (SD-OCT) after pars plana vitrectomy with silicone oil tamponade.

Methods: A retrospective observational study included 24 patients who had undergone pars plana vitrectomy with silicone oil tamponade for proliferative vitreoretinopathy (PVR) retinal detachment.

Results: In SD-OCT examination, none of the patients had hyperreflective round shapes droplets visible one month after vitrectomy with silicone oil tamponade. The hyperreflective droplets were found three months after surgery – in one patient above the optic nerve; in five patients intraretinally (in the cystoid spaces). Six months after vitrectomy, the hyperreflective round shapes droplets were still present in the aforementioned patients' eyes and additionally in 3 eyes above the optic disc.

Conclusions: Hyperreflective round shaped droplets were found in a SD-OCT examination 3 months after silicone oil tamponade. The authors suggest that they are most likely the emulsified silicone oil droplets. The authors hypothesize that emulsification and migration of silicone oil begins within 3 months after surgery.

O -57

Heavy silicone oil as first choice in complicated retinal detachment: Checkmate in two moves!

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Purpose: To show our strategy in complicated retinal detachment (RD) cases with high possibility of development of post operative PVR and R.D. recurrence.

Setting: Department of Ophthalmology, Hospital S. Maria delle Croci, Ravenna, Italy.

Methods: 24 selected patients, with high risk of PVR recurrence (>C3) were trated with heavy silicon oil (Densiron 68, Fluoron).For all patients, routinely we perform an ILM peeling, prior staining (in fluid or PFCL) with ICG or Brilliant Peel; use of endolaser on present break(s) and at 360°; direct PFCL-HSO exchange or prior air exchange. HSO is maintained within a period among 60 and 90 days.

RESULTS: Recurrence at the superior retina was present in 7 cases (30%) between 9 and 3 o'clock, at the moment of the second procedure performed among 60-90 days from the first operation. In 3 cases it was used 1000 cs oil, in 4 cases gas mix (C2F6 15%). Of the 3 cases were tamponade with 1000cs oil 2 cases had to be reoperated with the use of 1000 cs oil.4 cases are highlighted of exudation in anterior chamber over the anterior and posterior surface of the IOL, associated to increase of intraocular pressure, all well controlled with medical therapy.

CONCLUSIONS: The choice of HSO Densiron 68, associated with the ILM routine peeling, has avoided R.D. recurrence episodes or PVR at inferior sectors and at the posterior pole (in any case, no macular secondary pucker was encountered). HSO does not oblige the patient to uncomfortable positioning.

O -58

Strategy for the management of optic pit maculopathy

A Meireles

Porto Hospital Center

Purpose: Evaluate the efficacy of primary pars plana vitrectomy (PPV) in the treatment of optic pit maculopaphy.

Effectiveness: There is no clear consensus on optimal management for maculopathy associated with optic pit. In the last years there has been an increasing emphasis on vitrectomy with distinct adjunct procedures and variable outcomes.

My Way / Tips and Tricks: the strategy used in all cases (11 cases) was a PPV with induction of posterior vitreous detachment, ILM peeling, laser photocoagulayion at the border of the pit and gas tamponade with postoperative facedown positioning for 1 week

Conclusions: complete retinal re-attachment followed by an improvement in visual acuity was achieved in all patients

T**ake-home message**: The surgical approach with PPV, ILM peeling and laser photocoagulation is successful in improving the anatomical and functional outcome in patients with optis disc pit maculopathy.

O -59

Different Strategies for the Surgical Treatment Of Optic Pit Maculopathy

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Our standard approach to optic pit related macular detachment is vitrectomy with posterior hyaloid removal, ILM peeling with or without laser PK temporal to optic nerve head and gas as a first line treatment. In case of recurrence of macular detachment, we usually use ILM flaps around the optic nerve head to use as a seal over the pit as a second line treatment and autologous fibrin to seal the pit as a third line treatment. We will present videos representative for all of these conditions during presentation.

O -60

One pars-plana port 27G with reflow strategy for macular diseases

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Purpose: to report our approach for macular diseases using anterior chamber infusion during the reverse zonular flow "Reverse flow" (personal technique) one port pars plana 27G vitrectomy technique.

Setting/Venue: Department of Ophthalmology, Hospital S. Maria delle Croci, Ravenna, Italy.

Methods: A retrospective analysis of 5 eyes which underwent re-flow one port 27g vitrectomy with the infusion in the anterior chamber for macular diseases. This technique was used to decrease the turbulence of fluids in the vitreous cavity and for the possibility of decreasing the number of scleral ports to one port in cases of simple vitrectomy. For these eyes we reviewed the functional outcome, anatomical outcome and the possible long-term complications.

Results: All patients had the retina applied. We had one case of inferior retinal detachment after 1 week which resolved spontaneous after 5 days. One case with macular hole presented enlargement of hole after 1 week and was treated with gas injection.

Conclusions: One Pars Plana Port- 27G with "Reflow" is a effective and safety technique for macular diseases, even in very thin approach.

O -61

Surgical indications and outcomes for Myopic Traction Maculopathy

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Porto Hospital Center

Purpose: to report our indications and approach for myopic traction maculopathy (MTM)

Effectiveness: MTM is most of the time a stable condition with little impact on visual function even with impressive OCT scans, although it may progress into different clinical pictures with more or less loss of visual acuity associated with structural alterations on the posterior pole. Surgery is in selected cases the only available approach to improve the funcion and restore the macular anatomy.

My way/ Tips and tricks: vitrectomy with ILM staining assisted peeling in the cases with foveoschisis and macular detachment with or without macular hole. The cases with no progression and without central stafiloma followed by OCT remain in observation.

Conclusions: the surgical approach with vitrectomy and ILM peeling can be performed with good results in the selected cases with progression.

Take-home message:the myopic traction maculopathy is most of the time a fairly stable condition, but in some cases can progress with loss of vision that can be restored with surgical approach.

O -62

Lateral capillary forces as the mechanism of closure in Macular Holes

Author (s): Vincent Reppucci

Purpose: To outline the mechanism of closure in macular hole surgery; specifically the importance of deforming the fluid-air interface at the edge of the macular hole.

Effectiveness: Macular hole surgery is very effective in closing macular hole.

Conclusions: Macular holes close along the inner retinal surface with migration assisted by the capillary forces created by deformation of the fluid interface at the edges of the macular hole. The forces generated are inversely proportional to distance, i.e. hole diameter. Take Home Messagge: Create a pvd, peel ILM, use chromodyes to confirm ILM and ERM removal, create as large a bubble as one can by removing peripheral vitreous and repeating the fluid-air exchange after 5-10 minutes. If hole is not closed after 2-3 days it will never close.

MY WAY - Tips and Tricks: This will provide the surgeon with a basis to allow for better understanding of how the vitrectomy procedure effects closure of the macular hole.

O -63

Peroperatory closure of recurrent large macular holes

Levent Karabaş

O -64

Massaging Large Macular Holes

G.D. Pappas, A. Angelakis, E. Paragioudakis

O -65

Unusual closure of macular holes-description of several interesting cases.

D Odrobina, Laudanska-Olszewska I**

Ophthalmology Clinic Boni Fratres Lodziensis, Lodz, Poland

Presenting unusual closure of macular holes after vitrectomy because of VMT, retinal detachment and spontaneous closure of macular hole after the formation of CNV. We describe the possible mechanisms for closing the holes that were not previously presented.

O -66

Membranectomy under PFC liquids

Remzi Avcı

O -67

Vitreous staining during macular hole surgery-my way.

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Purpose: The purpose of thIs presentation is to show alternative way of staining vitreous during PVD induction in MH surgery.

My way: There have been papers published saying that triamcynolon usage during MH surgery may suppress the macular hole closure.

The use of Membrane Dual (Dorc) is an alternative way for good vitreous visualization that gives the opportunity of staining ILM in the same time.

Conclusions: Membrane Dual gives opportunity of staining both vitreous and ILM.

O -68

Microperimetry use in clinical practice

Fevzi Şentürk

Although best corrected visual acuity test remains the gold standard assessment tool for measuring visual function in routine clinic practice it does not entirely reflect functional vision. In case, we need other functional tests to more detailed assess to macular function in retinal diseases. A test of visual function which may help in understanding the characteristics of visual loss in retinal diseases could be microperimetry. With microperimetry retinal fixation and macular sensitivity may be accurately tested. In this presentation it is shown several cases encompassing the results of microperimetry.

O -69

Process of histapathological study retinal membrane of different retinal disease

Dr.Nabil Taresh Ph.D Dr.Ameen Okbh Ph.D Dr.Basma Al-Refaei Msc.

MAGRABI eye hospiatl, Alkwait university hospital, Sana'a university.

To show the process of membrane biopsy analysis and it's importance. In this study included cases (diabtic retinopathy with tractional retinal detahment,acute and chronic endoephthalmities, retinal detachment with PVR, subretinal membrane, membrane under silicon oil).

Pars plana vitreoctomy done with membrane peeling and removal fragment of the membrane in all cases and sent it to histapathological study.

In our recent study all membranes have cells of infalammatory and degenerative process from mild to severe depend on retinal disease.

Conclusion

Membrane biopsy study is not easy but identification of pathalogy could have important implication in design of new therapeutic regimens

O -70

Scatter photocoagulation of nonperfused retina for the treatment of persistant macular edema in RVO.

Bora Eldem

The role of targeted photocoagulation to the areas of capillary drop out in retinal vein occlusion which was unresponsive to anti-VEGF treatment due to macular edema will be discussed. A literature review will be presented against other treatment strategies in a scenario described above.

O -71

Micropulsed laser for the treatment of macular edema

Flores-Aguilar Martin

Medical & Surgical Retina Celaya

Methods: We present the use of 577 nm micropulsed laser for several types of macular edema as diabetic macular edema (DME) and edema secondary to vascular oclussions.

One hundred fifty-six eyes of 116 diabetic patients and twenty-nine eyes of 29 patients with branch retinal vein oclussion (BRVO) were treated with yellow micropulsed diode laser in highly confluent manner. ETDRS best corrected visual acuity, High definition optical coherence tomography to determine central macular thicknes and Fluorescein angiography (FA) were performed at basal, 1, 3, 6, 9, 12 and 18 months after treatment (12 months in the case of BRVO) and if necessary the aplication of a new treatment every three months.

Effectivenes: Central macular thickness decreased by 198 µm at 18 months with an increase of 14 ETDRS letters in the group of DME and 255 µm with an increase of 10 ETDRS letters in the group of edema secondary to BRVO. Laser lesions were not observed clinically nor on FA examination.

Take home message: Micropulsed laser seems to be efective and longlasting as a selective alternative to stop progress of damage produced by DME and edema secondary to BRVO with minimal or null thermal damage to the retina and may be considered as an adjunct to current standard treatment.

O -72

Alterations of ocular dimensions following intravitreal dexamethasone implant injection for branch retinal vein occlusion with macular edema

O Cekic, S Akkaya Turhan

Marmara University Faculty of Medicine,Department of Ophthalmology

Purpose: To investigate the short-term impact of intravitreal dexamethasone implant on ocular dimensions.

Methods: Eight patients with macular edema due to branch retinal vein occlusion were included in this study. Patients were injected with slow releasing dexamethasone implant and followed-up at 1, 4, 8 and 12 weeks. Axial length, aqueous depth, lens thickness, vitreous depth, central corneal thickness, keratometric values and pupil diameter were measured by low-optical coherence reflectometry. Endothelial cell density was measured by specular microscopy. Spherical equivalent was calculated by adding the spherical power, and half the cylinderical power.

Results: The baseline mean spherical equivalent (diopters) altered from 1.15 to 0.57 at 1 week ($p = 0.026$), 0.28 at 4 weeks ($p = 0.028$), 0.00 at 8 weeks ($p = 0.028$) and 0.21 at 12 weeks ($p = 0.027$). The baseline mean axial length (mm) altered from 22.61 to 22.73 at 1 week ($p = 0.028$), 22.83 at 4 weeks ($p = 0.012$), 22.75 at 8 weeks ($p = 0.028$) and 22.69 at 12 weeks ($p = 0.018$). The baseline mean lens thickness (mm) changed from 4.41 to 4.47 at 4 weeks ($p = 0.09$), 4.51 at 8 weeks ($p = 0.046$) and 4.46 at 12 weeks ($p = 0.028$). Aqueous depth, vitreous depth, central corneal thickness, pupil diameter, endothelial cell density and keratometric values did not change after injection ($p > 0.05$ for each).

Conclusions: Slow releasing intravitreal dexamethasone implant resulted in a myopic shift most probably due to the elongation of axial length and increase of lens thickness.

O -73

Surgical treatment of retinal vein occlusion: a case series

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Eye Unit Fabriano (AN) Hospital, Italy

PURPOSE: To describe outcomes after pars plana vitrectomy (PPV) and internal limiting membrane (ILM) peeling for macular edema in patients with retinal vein occlusion (RVO) and secondary epiretinal membranes (ERMs).

EFFECTIVENESS: 5 patients with branch or central RVO and vision loss for macular edema underwent several intravitreal triamcinolone injections and PPV after the observation of ERMs formation. Full ophthalmic examination and spectral domain OCT (SD-OCT) were performed before and after surgery. After vitrectomy, 3 patients achieved a better visual acuity (VA) from baseline and 2 patients achieved VA stabilization.

CONCLUSIONS: Surgery can be helpful in case of refractory macular edema due to retinal vein occlusion.

O -74

Endovascular surgery in central retinal vein occlusion

Levent Karabaş

O -75

Different surgical strategies for the treatment of retinal angiomas

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[2]: Gazi Universtiy School of Medicine, Ankara, Turkey

Abstract

Purpose: To report two cases with retinal angiomas

Matherial and Methods: Thirty-seven year-old male patient with a retinal angioma was referred to our Ophthalmology Department with blurred vision (case 1). He has lost his fellow eye after a vitreoretinal surgery for angioma in an another center previously. Pre-operative visual acuity was 20/60 and optical coherence tomography (OCT) scan showed cystoid macular edema and epiretinal membrane. Angioma was located in the superior peripheral retina. Also sixteen year-old male patient with Von Hippel Lindau Syndrome was referred to our Ophthalmology Department with blurred vision (case 2). Preoperative visual acuity was hand motion on the affected eye. Two retinal angiomas was located in the nasal and inferior peripheral retina with severe preretinal membranes and vitreous hemorrhage. He had gone two cranial surgeries due to the cranial hemangiomas previously.

Results: Both patients were treated with Parsplana vitrectomy (PPV). After PPV and epi-retinal membrane peeling cryotheraphy was applied 3 times to the retinal angioma in case 1. Visual acuity was improved to 20/25 and there was no macular edema in OCT one month after the surgery. In case 2, retinal angiomas were dissected after PPV and preretinal membran peeling. Visual acuity was improved to 20/200 one month week after the surgery.

Conclusion: Surgical treatment of retinal angioma is PPV with dissection of the angioma. Cryotheraphy with PPV without angioma dissection is one of the other conservative surgical procedure for the treatment of retinal angiomas of patients who have absence of vision on the fellow eyes.

O -76

Relevance of Indocyanine Green Angiography for the Diagnosis of Non-inflammatory Chorioretinal Diseases

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Purpose: Indocyanine green angiography (ICGA) is considered to be of little clinical relevance nowadays. The purpose of our study was to assess the relevance of indocyanine green angiography for the diagnosis of noninflammatory chorioretinal diseases.

Methods: The charts of 918 patients who underwent ICGA in the work-up of a noninflammatory chorioretinal disease were reviewed. For all patients, fundus photographs, fluoescein and indocyanine green angiograms were analyzed. Conditions for which ICGA was strongly contributive to establish definitive diagnosis were identified.

Results: ICGA was imperative for the definitive diagnosis of choroidal hemangioma (N=6), complicated retinal or optic disc macroaneurysms (N=7), polypoidal choroidal vasculopathy (N=5), choroidal neovascularization (N=15), atypical central serous chorioretinopathy (N=10), complicated osteoma (N=1), and amyloidosis (N=1).

Conclusion: ICGA may strongly help to establish the definitive diagnosis in a subset of patients with specific noninflammatory chorioretinal diseases.

O -77

Endophthalmitis Due To Uncontrolled Postoperative Topical Medication After Phaco Surgery

Prof. Dr. Nilüfer Koçak, FEBO, Prof. Dr. Süleyman Kaynak, FEBO

Purpose: To report a case with keratitis and related endophthalmitis secondary to prolonged and uncontrolled use of postoperative topical medication after uneventful phaco surgery.

Materials and Methods: A 70-year-old otherwise healthy female presented with foreign body sensation, redness, photophobia, and diminished vision in her left eye for 7 days. Although she had been using dexamethasone and ofloxacine drops six times in a day after an uneventful left phacoemulsification surgery, she had not attended any postoperative control visits for 2 months. Best-corrected visual acuities were counting fingers in the left eye and 20/30 in the fellow eye. Slit-lamp biomicroscopy revealed corneal edema, hypopyon and dense flare in the anterior chamber with suppurative keratitis located at the superonasal quadrant of the cornea. Corneal scrapings and conjunctival samples were obtained for culture and the patient received eye lubrication and intensive topical therapy with fortified vancomycin and ceftriaxone eye drops.

Results: Although ceftriaxone sensitive Streptococcus pneumonia was detected in corneal scrapings, corneal lesion did not response to empiric topical antibiotherapy, furthermore endophthalmitis was diagnosed after ocular ultrasonography revealed increased vitreal echogenity. Vitreous tap combined with intravitreal injection of vancomycin and ceftriaxone was performed subsequently, and intensive topical antibiotherapy was stopped. At the last folow-up visit, visual acuity was 10/200 in the left eye, and slit-lamp biomicroscopy revealed corneal scarring with mild corneal edema.

Conclusion: Many of the ocular topical medications contain preservative chemicals to prolong the shelf life, however ocular toxicity has been reported with such ingredients. As vision threating serious ocular complications may be seen after toxic keratitis, it is mandatory to schedule postoperative follow-ups of the patients underwent ocular surgery in order to prevent excessive topical medication even after uneventful phaco surgery. Cessation of topical therapy after intravitreal drug injections for the treatment of endophthalmitis ought to be considered to avoid corneal decompensation before any possible vitrectomy surgery.

O -78

Assessment Of Patıent Pain Experience During Intravitreal Bevacizumab And Ranibizumab Injection

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PURPOSE: To compare pain scores of patients during intravitreal bevacizumab and ranibizumab (Lucentis) injection procedure.

MATERIALS AND METHODS: 70 eyes of 70 patients, who had not previously undergone intravitreal anti-VEGF therapy were included in this study. 35 patients received bevacizumab (Group 1) and 35 patients received ranibizumab (Group 2). Bevacizumab was previously dispensed into (1.25 mg/0.05-mL) single-use 27-gauge needle syringes using an aseptic technique and injected into the vitreous cavity through the pars plana at the inferotemporal quadrant, 3.5-4.0 mm posterior to the limbus. Ranibizumab (0.5 mg/0.05 mL) was injected with the same method using 30 gauge needle. Patients were asked to score their pain experience using a visual analogue scale (VAS) immediately following their injection. The average of these scores was used as the primary outcome.

RESULTS: The mean age was 60.43±12.13 (range 42-83) in group 1 and 64.86±10.04 (range 41-81) in group 2, respectively. The mean age of groups were similar (p=0.151). In group 1, 16 patiens were male and 19 were female. In group 2, 18 patients were male and 17 were female. VAS pain scores in bevacizumab and ranibizumab groups were 1.94±1.55 (range 0-7) and 1.06±0.91 (range 0-3), respectively. There was a significant difference between groups for average VAS pain scores (p=0.005).

CONCLUSIONS: 30 gauge intravitreal ranibizumab injection is more comfortable than 27 gauge bevacizumab injection. Preparation of bevacizumab with 30 gauge needle syringes may be more tolerable for patients.

O -79

Intravitreal Bevacizumab in Patients with Central Serous Chorioretinopathy

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Aim: To evaluate the treatment of central serous chorioretinopathy (CSC) with either intravitreal bevacizumab (IVB) or only observation.

Methods: Medical records of CSC patients who received intravitreal bevacizumab (1,25 mg/0,05 ml) or only observation were assessed. Twenty two patients were eligible for the IVB group and 23 patients were eligible for the observation group. At baseline and follow-up visits, patients had best corrected visual acuity (BCVA), intraocular pressure (IOP) assesment, dilated fundus examination and optic coherence tomography (OCT) imaging. Outcome measures included central macular thickness (CMT) and best corrected visual acuity.

Results: All patients showed total or near total resolution of neurosensory detachment and improvement in visual acuity. At the final visit, although there was no significant difference in mean central macular thickness between the IVB injection group and the observation group (275 μm vs 284 μm, $p > 0,05$). Improvement of BCVA was better in the observation group ($p < 0,05$). No ocular or systemic complications related to IVB injection occured during follow-up.

Conclusions: There was no significant difference between IVB injection and only observation for anatomical outcome. In terms of functional outcome, observation was better than IVB injection. Further controlled studies will enlighten us about the use of anti-VEGF treatment in patients with CSC.

O -80

The effect of systemic tamsulosin hydrochloride on choroidal thickness measured by enhanced depth imaging spectral domain optical coherence tomography

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Objective: To evaluate the effects of selective α1A adrenoreceptor antagonist (tamsulosin hydrochloride) on choroidal thickness using enhanced depth imaging spectral domain optical coherence tomography (EDI-OCT).

Patients and Methods: This is a prospective observational study. Twenty nine eyes of 29 patients with newly diagnosed benign prostatic hyperplasia (BPH) were included. Choroidal thickness was measured by EDI-OCT at baseline and after 3 months of the tamsulosin treatment and compared.

Results: The mean subfoveal choroidal thickness and thicknesses of 750 μm nasal and 750 μm temporal to the fovea was significantly increased after 3 months of the treatment ($p<.001$).

Conclusion: Choroidal thickness was significantly increased after 3 months administration of daily 0.4 mg systemic tamsulosin hydrochloride in BPH patients. This finding may be related to the choroidal vasodilation in consequence of blockade of α1A adrenoreceptors in the choroidal vascular architecture which is critical for the maintenance of vascular tone and resistance.

ABSTRACTS - POSTER

P -1

Investigation of choroidal thickness in patients with hypothyroidism

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Objective: To evaluate the choroidal thickness in patients with subclinical hypothyroidism, overt hypothyroidism and biochemically euthyroid hypothyroidism and compare choroidal thickness of hypothyroid patients with healthy subjects.

Materials and Methods: One eye of 71 hypothyroid women (24 subclinical hypothyroid, 23 overt hypothyroid and 24 euthyroid patients under levothyroxine therapy) and 22 healthy women aging between 20-40 years were included in this study. Choroidal thickness measurements were taken at the fovea and at 2 points that were 1500 µm nasal and temporal to the fovea using spectral domain optical coherence tomography. Independent samples t-test, point biserial correlation analysis and logistic regression analysis were used for the statistical analysis of the data.

Results: The choroidal thickness was significantly thicker in all groups of hypothyroid patients (p values were 0.013 for subfoveal, 0.015 for temporal and 0.020 for nasal segments). There was statistically significant difference in the subfoveal choroidal thickness measurement between healthy subjects and group of subclinical and overt hypothyroid patients (p=0.041). There was statistically significant difference in the subfoveal choroidal thickness measurement between healthy subjects and euthyroid patients (p=0.006). There was no statistically significant difference in the subfoveal choroidal thickness measurement between euthyroid patients and group of subclinical and overt hypothyroid patients (p=0.235). However, we did not identify a significant difference in central retinal thickness and global retinal nerve fiber layer thickness of the healthy subjects and all groups of hypothyroid patients (p values were ranging between 0.162 and 0.169, respectively). The point biserial correlation test revealed a fair and statistically significant correlation between presence of hypothyroidism and subfoveal choroidal thickness (correlation coefficient value is 0.256 and p=0.013).The odds ratio for subfoveal choroidal thickness was 1.009.

Conclusions: Hypothyroid patients had thicker choroidal layer than healthy subjects and the choroidal thickening did not reverse with thyroid replacement therapy.

P -2

Clinical results of a single dose intravitreal injection of dexamethasone implant for macular edema secondary to BRVO

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Purpose: To evaluate the clinical efficacy of intravitreal dexamethasone implant in eyes with macular edema secondary to branch retinal vein occlusion (BRVO).

Methods: Eight treatment-naive patients (median age, 53 years) with decreased visual acuity because of BRVO-related macular edema underwent intravitreal slow releasing dexamethasone implant injection. The patients were examined at 1, 4, 8 and 12 weeks after injection. Main outcome measures were best-corrected visual acuity (ETDRS), contrast sensitivity (Pelli-Robson charts) at photopic condition (85 cd/mm2) and the central retinal thickness by using optical coherence tomography. For statistical comparisons, ETDRS values of visual acuity were converted to the logMAR equivalents.

Results: The baseline median logMAR visual acuity 0.7 improved to 0.25 at 4 weeks ($p = 0.012$), 0.1 at 8 weeks ($p = 0.018$), and decreased to 0.4 at 12 weeks ($p = 0.058$). The pre-injection median logMAR contrast sensitivity 0.37 improved to 0.67 at 1 week ($p = 0.026$), 0.97 at 4 weeks ($p = 0.012$), 1.05 at 8 weeks ($p = 0.018$), and 0.75 at 12 weeks ($p = 0.04$). The baseline median central retinal thickness (585 μm) was measured 339 μm at 1 week ($p = 0.012$), 272 μm at 4 weeks ($p = 0.012$), 228 μm at 8 weeks ($p = 0.018$), and 337 μm at 12 weeks ($p = 0.063$).

Conclusions: Intravitreal dexamethasone implant provides a significant improvement in the visual acuity, contrast sensitivity and macular edema in the short term in eyes with BRVO. There was a tendency to recurrence of edema at 12 weeks.

P -3

Evaluation of retina and choroid in patients with vitamin B12 defficiency

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Objective: To evaluate the retinal, retinal nerve fiber layer and choroidal thicknesses of patients with vitamin B12 deficiency and compare them with healthy subjects.

Materials and Methods: One eye of 50 healthy subjects and 28 patients with vitamin B12 deficiency aging between 18-62 years were included in this study. Electromyelography measurements of the patients with vitamin B12 deficiency were within normal limits (to ensure that to include patients without polyneuropathy). Retinal and choroidal thickness measurements were taken at the fovea and at 2 points that were 1500 μm nasal and temporal to the fovea using spectral domain optical coherence tomography. Independent samples t-test was used for the statistical analysis of the data.

Results: Serum vitamin B12 levels of the healthy subjects and patients with vitamin B12 deficiency was 406.74±26.12 and 160.71±20.06 pg/ml, respectively. The mean subfoveal choroidal thickness of healthy subjects and patients with vitamin B12 deficiency were 355.36±81.51 and 364.25±86.62 μm, respectively. Although the choroidal thickness was thicker in patients with vitamin B12 deficiency, this difference did not reach to statistical significance (p =0.653). The mean central retinal thickness of healthy subjects and patients with vitamin B12 deficiency were 216.06±14.64 and 213.50±13.39 μm, respectively and this difference did not reach to statistical significance (p =0.448). The mean global retinal nerve fiber layer (RNFL) thickness of healthy subjects and patients with vitamin B12 deficiency were 103.00±10.24 and 100.15±6.42 μm, respectively and it did not reach to statistical significance (p=0.217).

Conclusions: Patients with vitamin B12 deficiency had thicker choroid and thinner retina and RNFL. As a preliminary report, our sample size might not be sufficient to determine the statistical significance for RNFL, retinal and choroidal thickness.

P -4

Complete spontaneous resolution of dense sub-inner limiting membrane macular hemorrhage in a patient with acute myeloid leukemia

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Purpose:

To describe a case of spontaneous resolution of dense sub-inner limiting membrane macular hemorrhage in a patient with acute myeloid leukemia.

Case Report:

A 26-year-old male with M3 acute myeloid leukemia presented with a loss of central vision in the right eye. His visual acuity was counting fingers in the right eye and 20/20 in the left eye. Bilateral slit lamp examination and fundus examination were unremarkable except a dense immobile and five optic disc size sub-inner limiting membrane central macular hemorrhage in the right eye (Figure). Optical coherence tomography was also confirmed the localization of the blood clot (Figure). Pneumatic displacement of the hemorrhage or pars plana vitrectomy together with inner limiting membrane peeling was suggested to the patient as his platelet count (182.000) was allowing the treatment. However, the patient refused any intervention to his eye. At the third week, a slight regression of the hemorrhage started. At the eight week, partial resorption of hemorrhage was observed and the visual acuity improved to 20/30. At the fourth month, the final visual acuity improved to 20/20 in the affected eye and fundus examination revealed complete regression of sub-inner limiting membrane macular hemorrhage (Figure).

Discussion:

Although an early intervention has been recommended for preretinal hemorrhage due to the other causes, complete spontaneous clearance of dense sub-inner limiting membrane macular hemorrhage may also be possible as happened in our case with acute myeloid leukemia.

P -5

Subfoveal Choroidal Thickness in Pseudoexfoliation Syndrome

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P -6

Vision Loss and RNFL Thinning after Internal Carotid Arter Occlusion and Middle Cerebral Artery Infarction

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Introduction: Ischaemic, traumatic or neoplasmic damage to the optic chiasm, optic tract or lateral geniculate nucleus affects the retinal ganglion cell (RGC) axons, detected as reduced retinal nerve fiber layer (RNFL) thickness around the optic nerve head. We report a case of vision loss and reduced RNFL thickness after internal carotid arter (ICA) occlusion and middle cerebral artery (MCA) infarction.

Case Report: A 33-year-old woman with a 3-month history of vision loss in right eye and left hemiplegia. The best corrected visual acuity was 1.0 in left eye and there was no light perception in the right eye. Ocular motility, intraocular pressure, anterior segments were normal in the both eyes. Her fundus examinations were normal except optic atrophy in the right eye. Visual field test was not performed because of cooperation difficulties. Magnetic resonance imaging (MRI) revealed an infarction of the right MCA. Computed tomographic angiography showed right ICA occlusion. Optical coherence tomography (OCT) demonstrated 6 clock hours of RNFL thinning in the right eye. Average RNFL thickness of the right and left eyes were 53μm, 96 μm respectively.

Conclusions: Our findings show that a relatively short period of ICA occlusion and MCA infarction can cause vision loss and thinning of the RNFL.

P -7

A Case of Bilateral Chorioretinal Coloboma Mimicking Accessory Optic Disc

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Purpose: To report an unusual case of bilateral chorioretinal coloboma resembling optic disc duplication.

Case: 34 year-old woman applied to our clinic with complaints of low visual acuity in both eyes and strabismus. On ophthalmological examination, her best-corrected visual acuities were 2/10 with (+10.75–5.00 x 90˚) in right eye and 2/10 with (+11,00-3.75x 55˚) in left eye. 35-40 prism diopter of alternating exotropia was detected with alternate cover test. There was not notable findings regarding the anterior segment under slit lamp examination. The light reflex was normal in both eyes, and relative afferent pupillary defect was not seen. Fundus examination revealed bilateral chorioretinal lesions resembling accessory optic disc. Further investigation has revealed that these lesions were bilateral chorioretinal colobomas. Retina was attached and optic discs were non-colobomatous with less than 0.1 cup to disc ratio in both eyes. In right eye, choroidal coloboma was located in one and a half optic disc diameter inferior to the optic disc. In left eye, it was located in one disc diameter inferior to the optic disc. In optical coherence tomography both infero-temporal retinal nerve fiber layer showed some defects. Computerized visual field exam could not be performed due to poor cooperation and exotropia. Fundus fluorescein angiography revealed no notable findings other than chorioretinal coloboma. Extraocular muscles, optic nerve (single optic nerve in each orbit) and retrobulber structures were normal in both eyes under MRI evaluation.

Conclusion: True optic disc duplication with two independent retinal vasculatures is rare. In this case emergence of blood vessels from the center of the colobomatous area and the colobomatous area itself were resembling an accessory optic disc. One should be aware of chorioretinal colobomas may resemble accessory optic disc.

P -8

Comparison Of Choroidal Thicknesses In The Chronic Smokers With Healthy Individuals By Using Optic Coherence Tomography

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OBJECTIVE: To compare the choroidal thicknesses in the chronic smokers with non-smoking healthy individuals by using spectral domain optic coherence tomography (SD OCT).

METHODS: Forty-six cases smoking at least for 20 years otherwise without systemic problem participated in the study. Control group comprised of non-smoking 38 cases. The ages, refractions and axial length measurements of the cases were recorded. Central macular thickness (CMT), subfoveal choroidal thickness (SFCT) and choroidal thickness at 500µ, 1000µ, 1500µ and 2000µ nasal and temporal part of the fovea were measured by using SD OCT. These measurements obtained were compared between two groups. RESULTS: While smoking period of the smokers was mean 32,35±9,01 (20-60) years, amount of smoking was determined to be mean 1,04±0,57 (0,5-3) package per day. No statistically significant difference was observed regarding refraction value and axial length according to the cigarette ($p>0,05$). While mean CMT and mean SFCT of the smokers were 232,48±17,27 and 348,63±90,78 respectively, CMT and SFCT in the control group were measured to be 228,42±14,44 and 351,03±108,73, respectively. No statistically significant difference was observed regarding CMT, SFCT, choroidal thickness values at 500µ, 1000µ, 1500µ and 2000µ nasal and temporal part of the fovea according to the smoking ($p>0,05$).

CONCLUSIONS: Macular and choroidal thicknesses in the long-term smokers were observed to be similar to the healthy individuals.

P -9

A Case Of Panuveitis Associated With Buerger's Disease

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P -10

Undiagnosed retinal diseases before keratoplasty

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PURPOSE: The purpose is to evaluate the posterior segment events in keratoplasty patients.

EFFECTIVENESS: The records of 137 eyes of 132 keratoplasty patients with retinal diseases were reviewed. The patients were operated on between 1995 and 2013.The mean age was 57.7±1.8 years. The mean follow-up time was 3.4±2.7 years. Pre-operative retinal diseases were present in 57 eyes. Among these, 24 (42%) were undiagnosed preoperatively. The most common missed retinal diseases were optic atrophy (33%), macular scar (16%), cystoid macular edema sequela (12%) and age-related macular degeneration (12%). All 24 eyes had preoperative visual acuity of counting fingers from 3 meters or less. The visual acuities of 3 eyes improved while that of the remaining 21 eyes did not improve. New post-operative retinal diseases developed in 4 of 57 eyes with pre-existing retinal diseases: 2 eyes with degenerative myopia developed retinal detachment, 1 eye with degenerative myopia developed epiretinal membrane and retinal detachment recurred in 1 eye with Stickler Syndrome. In the remaining 80 eyes, retinal diseases occurred postoperatively. Among eyes with retinal detachment (n=18), which was the second most common postoperative posterior segment event following cystoid macular edema (n=24), 27.8% eyes had preoperative trauma.

B-scan ultrasonography is the most common method to evaluate the posterior segment before keratoplasty. All missed diseases were those that are difficult to diagnose by ultrasonography.

MY WAY: To keep the expectations of patients within realistic limits and to protect ourselves from challenging post-operative explanation moments, it is important to explain sufficiently that posterior segment ultrasonography is not capable of identifying all posterior segment diseases. It is also important to inform patients that visual acuity can remain unimproved because of retinal diseases in spite of clear grafts and successful surgery.

TIPS AND TRICKS: While explaining the B-scan ultrasonography results to patients, make sure they understand that when ultrasonography is normal, it does not mean that the retina is completely normal as well.

CONCLUSION: Preoperative posterior segment evaluation cannot reveal all posterior segment diseases that could lead to unimproved postoperative visual acuity.

TAKE HOME MESSAGE: Inform patients that posterior segment events that cannot be detected preoperatively can prevent visual acuity improvement.

P -11

Subfoveal thickness measurements in gestational diabetic patients with EDI-OCT

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OBJECTIVE: To evaluate the subfoveal choroidal thickness (SFCT) measured by enhanced depth imaging optical coherence tomography (EDI-OCT) in gestational diabetes mellitus (GDM) without diabetic retinopathy.

MATERIAL AND METHODS:This prospective study population included 44 patients with GDM recruited from the division of Obstetrics for the study (study group, group 1). The study also included 44 healthy pregnant women (group 2), and 44 healthy non-pregnant volunteers who served as controls (group 3). The SFCT was measured by EDI-OCT. The refractive error, intraocular pressure (IOP), axial length (AL), central corneal thickness (CCT), systolic and diastolic blood pressure, ocular perfusion pressure (OPP) were also measured. Pregnancy related factors including gestational age, maternal weight gain, and fetal weight were noted. Correlations between SFCT and diabetic parameters including fasting glucose level, HbA1c, age, or duration of diabetes were also evaluated. The SFCT was measured using spectral domain OCT (Cirrus-HD OCT 4000, Carl Zeiss Meditec, Inc., Dublin, CA)

RESULTS: Mean SFCT (mean ± SD, μm) was 324.4±81.8 μm in cases with gestational diabetes mellitus (GDM); was 409.5±49.0 μm in healthy pregnant women, and was 299.2±65.8 μm in healthy non-pregnant women.The demographic and clinical characteristics of the 3 groups of subjects are shown in Table 1.

Table 2. shows the choroidal thickness data. Mean SFCT was measured as 324.4±81.8μm in group 1, 409.5±49.0 μm in group 2, and 299.2±65.8μm in group 3 (p=0.000).

Table 3. shows results of other clinical measurements the correlation analysis between SFCT and AL, CCT, IOP, OPP, Age, spherical refraction, gestational age, maternal weight gain, fetal weight gain, and HbA1C in groups.

CONCLUSION: In the hyperdynamic state of pregnancy, the inhibition of choroidal thickening mainly seems to be directly related to hyperglycemia but also, and recently to subclinical inflammation,afterwards, endothelial dysfunction which may present an association between GDM and type 2 diabetes.

P -12

Nd:YAG Laser Hyaloidotomy in a Case of Valsalva Retinopathy with Premacular Hemorrhage

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Purpose: To report a case of Valsalva retinopathy with a dense premacular hemorrhage whom was successfully treated with Nd:YAG laser hyaloidotomy.

Case: A healthy 27-years-old man presented with sudden painless visual loss after heavy cement bag lifting. His visual acuities were counting fingers and 20/20 in the right and left eyes, respectively. A dilated fundus examination revealed a large dome shaped preretinal hemorrhage in the right eye and a normal fundus in the left eye. Just after hyaloidotomy the hemorrhage rapidly drained into the vitreous cavity. The visual acuity was improved to 20/50 and 20/20 one week and two weeks after the procedure, respectively. Fluorescein angiography revealed a window defect located temporal to the fovea at the second week of Nd-YAG laser hyaloidotomy that seems to have emerged from the procedure.

Conclusion: Nd:YAG laser hyaloidotomy seems to be safe and effective theuropathic option in a selected group of patients with premacular hemorrhage.

P -13

Investigation of choroidal thickness in diabetic patients without diabetic retinopathy

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Objective: To compare the optical coherence tomography (OCT) findings of healthy subjects and type 2 diabetic patients without diabetic retinopathy.

Materials and Methods: One eye of age-matched 104 diabetic and 50 healthy subjects aging between 37-76 years were included in this study. Retinal nerve fiber layer (RNFL), retinal and choroidal thicknesses were evaluated. Retinal and choroidal thickness measurements were taken at the fovea and at 2 points that were 1500 μm nasal and temporal to the fovea using spectral domain OCT. Independent samples t-test was used for the statistical analysis of the data.

Results: The mean subfoveal choroidal thickness of healthy subjects and diabetic patients were 333.60±82.13 and 299.06±79.03 μm, respectively and the subfoveal choroidal thickness was significantly thinner in diabetic patients (p =0.013). The mean central retinal thickness of healthy subjects and diabetic patients were 217.58±15.62 and 226.66±19.05 μm, respectively and the central retinal thickness was significantly thicker in diabetic patients (p=0.004). The mean global RNFL thickness of healthy subjects and diabetic patients were 102.51±9.39 and 101.46±10.47 μm, respectively and it did not differ significantly between groups (p=0.610). The mean intraocular pressure of healthy subjects and diabetic patients were 13.27±2.28 and 15.95±3.10 mmHg, respectively and intraocular pressure was significantly higher in diabetic patients (p <0.001).

Conclusions: Diabetic patients without diabetic retinopathy had thinner choroid, thicker retina and higher intraocular pressure levels. Diabetic patients should be evaluated cautiously even before the onset of diabetic retinopathy.

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P -14

Investigation of choroidal thickness in patients with polycystic ovary syndrome

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Objective: To evaluate the retinal and choroidal thickness of patients with polysystic ovary syndrome (PCOS) and compare them with healthy subjects.

Materials and Methods: One eye of 20 PCOS patients and 22 healthy subjects aging between 18-34 years were included in this study. Retinal and choroidal thickness measurements were taken at the fovea and at 2 points that were 1500 μm nasal and temporal to the fovea using spectral domain optical coherence tomography. Independent samples t-test was used for the statistical analysis of the data.

Results: The mean subfoveal choroidal thickness of healthy subjects and PCOS patients were 365.73±100.97 and 394.00±94.72 μm, respectively but this difference did not reach to statistical significance (p =0.356). The mean central retinal thickness of healthy subjects and PCOS patients were 220.91±11.28 and 216.20±10.47 μm, respectively and this difference did not reach to statistical significance (p =0.240). The mean global retinal nerve fiber layer (RNFL) thickness of healthy subjects and PCOS patients were 106.95±8.66 and 102.05±7.90 μm, respectively and it did not differ significantly between groups (p=0.063). The mean Schirmer 1 test score of healthy subjects was 14.70±1.82 mm and the mean of PCOS patients was 11.58±4.50 mm. Schirmer 1 test was significantly lower in PCOS patients (p=0.002).

Conclusions: Women with PCOS had decreased tear function test values. PCOS patients had thicker choroid and thinner retina and RNFL. However, as a preliminary report our sample size might not be sufficient to determine the statistical significance. Besides ocular surface examination posterior segment examination should be considered in PCOS patients.

P -15

Optical coherence tomography findings in multiple sclerosis patients

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Objective: To evaluate the retinal and choroidal thickness of multiple sclerosis (MS) patients and compare them with healthy subjects.

Materials and Methods: One eye of 28 healthy subjects and 50 mildly affected MS patients aging between 18-59 years were included in this study. We included less severely affected eye of MS patients having bilateral ocular involvement. Retinal and choroidal thickness measurements were taken at the fovea and at 2 points that were 1500 μm nasal and temporal to the fovea using spectral domain optical coherence tomography. Independent samples t-test was used for the statistical analysis of the data.

Results: Expanded disability status scale and mini mental state examination score of MS patients was 1.4±1.30 and 28.96±1.40, respectively. The mean subfoveal choroidal thickness of healthy subjects and MS patients were 373.54±99.76. and 342.54±78.07 μm, respectively but this difference did not reach to statistical significance ($p = 0.170$). The mean central retinal thickness of healthy subjects and MS patients were 219.18±12.84 and 218.22±20.90 μm, respectively and this difference did not reach to statistical significance ($p = 0.826$). The mean global RNFL thickness of healthy subjects and MS patients were 105.18±9.10 and 90.71±12.44 μm, respectively and it was significantly different between groups ($p<0.001$).

Conclusions: Mildly affected MS patients had thinner choroid and RNFL. We added only mildly affected MS patients, we could not speculate about choroidal thickness of severely affected patients and also as a preliminary report our sample size was not sufficient to determine the statistical significance for choroidal thickness.

P -16

Comparison of choroidal thickness in predialysis patients with high and normal levels of parathyroid hormone levels

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Objective: The aim of this study is to evaluate the effects of parathyroid hormone (PTH) levels on the choroidal and retinal thickness of non-diabetic predialysis chronic kidney disease (CKD) patients using optical coherence tomography (OCT).

Materials and Methods: One eye of 25 CKD patients with high levels of PTH and 20 CKD patients with normal levels of PTH aged between 35-77 years were included in this cross-sectional study. Retinal and choroidal thicknesses of the patients were measured using high resolution OCT line scans with the activated enhanced depth imaging mode. Retinal and choroidal thickness measurements were taken at the fovea and at two points that were 1500 μm nasal and temporal to the fovea. Independent samples t-test was used for the statistical analysis of the data.

Results: The mean PTH levels of CKD patients with normal levels of PTH and CKD patients with high levels of PTH were 53.61± 13.89 and 202.01± 101.79 pg/ml. The mean central retinal thickness and subfoveal choroidal thickness of CKD patients with normal levels of PTH were 222.15 ± 24.79, and 267.45 ± 78.47 μm, respectively. The mean central retinal thickness and subfoveal choroidal thickness of CKD patients with high levels of PTH were 223.24 ± 22.86 and 293.76 ± 94.86 μm, respectively. There was no statistically significant difference between retinal thickness and choroidal thickness of two groups (p values were 0.879 and 0.325, respectively). The choroidal thickness of CKD patients with high levels of PTH was thicker than CKD patients with normal levels of PTH. We did not identify a significant difference in spherical equivalent, central corneal thickness, axial length and intraocular pressure of CKD patients with normal levels of PTH and CKD patients with high levels of PTH (p values were ranging between 0.112 and 0.693).

Conclusions: As a preliminary report, CKD patients with high levels of PTH had thicker choroid that might be due to increased metastatic calcification in choroidal tissue and/or increased inflammatory process seen in patients with high PTH levels.

P -17

Combined Treatment Of Transluminal Nd: YAG Laser Embolysis With Hyperbaric Oxygen Treatment For Branch Retinal Artery Occlusion: A Case Report

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Objective: The aim of our case report is to share the efficacy of the combination treatment of transluminal Nd: YAG laser embolysis (TYE) with hyperbaric oxygen (HBO) in branch retinal artery occlusion (BRAO). **Case Report:** Seventy-seven year old female patient admitted to our clinic with the complaints of deterioration of vision and loss of the vision on the lower half that happened three days ago. Best-corrected visual acuity (BCVA) was 0.3, anterior segment examination revealed pseudophakia and intraocular pressure was 16 mmHg. Fundus examination revealed multiple embolus at the arterioles near the upper hemiretinal artery bifurcation and pallor and edema extending to the upper part of fovea and on the retina. BRAO was diagnosed with fundus fleuroscein angiography (FA) and fibrin-platelet embolus. Embolus at the bifurcation was treated with TYE. A Goldmann three mirror lens was used to focus an Nd:YAG laser onto the arterial embolus. The laser energy level was started at 2.0 mJ and partial or complete disintegration of embolus was performed with 5 shots increasing the energy by 1 mJ to 4 mJ. During the procedure, small vitreous hemorrhage occurred through optic disk and it is stopped with globe indentation. On the same day, patient was sent to HBO treatment for 20 sessions that each session was performed with pressure of 2.4 ATA for 120 minutes. **Result And Discussion:** A week later BCVA was 0.8. Fundus examination revealed that fibrin-platelet plaques disappeared and the pallor of fundus was extinguised partially. FA was in normal range at the arterial flow. 3 weeks later, his BCVA was 0.9 percent. Combined treatment of TYE and HBO was thought to be effective in delayed patients with fibrin-platelet embolism induced BRAO that was detected by ophthalmoscopy and also confirmed by the angiography.

P -18

Pars plana displacement of the intravitreal dexamethasone implant (Ozurdex).

Taner Kar

PURPOSE: To present the pars plana displacement of Ozurdex implant in two cases and show importance of ultrasound biomicroscopy in evaluation of similar cases.

CASES: We report two cases of pars plana displacement of Ozurdex in two patients who were treated for macular edema due to chronic uveitis and central retinal vein occlusion. An uneventful intravitreal Ozurdex implant injection was performed. One day later, we could not determine the location of the implant with the fundus examination in both patients. Ultrasound biomicroscopy revealed the presence of the implant in the pars plana.

CONCLUSION: Ozurdex implant may migrate to pars plana and can not be seen in fundoscopic examination. Ultrasound biomicroscopy is a useful method to show the location of implant.

TAKE HOME MESSAGE: Physicians should keep in mind that implant may migrate to the pars plana when they could not see ozurdex in fundoscopic examination.

P -19

Investigation of Retinal Nerve Fiber Layer Thickness In Obese Children

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Objective: Obesity has an effect on intraocular pressure. Elevated IOP may be seen by changes in ocular blood flow, affected by the physical pressure exerted by higher retrobulbar adiposity, or by internal vascular changes in obese individuals. Therefore, obesity might have an effect on RNLF thickness. So, we aimed to compare the peripapillary retinal nerve fiber layer (RNLF) thickness and optic disc parameters of obese children with those of healthy controls.

Material and Methods: Eleven obese children and 14 age-sex matches healthy controls, totally 25 subjects were included in the study. Spectral-domain optical coherence tomography (SD-OCT) was used to measure the peripapillary RNFL and optic disc parameters on each subject after pediatric and ophthalmological examinations.

Results: The averages peripapillary RNLF thickness of superior quadrant was 125.7±13.6 μm in obese group and 114.7±11.1 μm in normal children (p=0.01). The averages RNLF thickness of inferior, nasal and temporal quadrants did not differ significantly between obese and normal children (p>0.05). The parameters of optic disc also did not differ significantly between the two groups (p>0.05).

Conclusion: The averages peripapillary RNLF thickness of superior quadrant was higher in subjects with obese children than in healthy subjects. For clinical assessment of peripapillary RNFL thickness, the influence of obesity should be taken into account. Larger studies with longitudinal data are required to confirm the role of obesity on peripapillary RNLF thickness.

Key words: retinal nerve fiber layer thickness, optic disc parameters, obesity, optical coherence tomography

P -20

The evaluation of the ganglion cell layer-inner plexiform layer complex thickness in patients with Parkinson's disease.

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Objective: Parkinson disease (PD) is a neurodegenerative disorders that lead to decrease in the retinal nerve fiber layer (RNFL) thickness. We aimed to determine if there is a correlation between the retinal nerve fiber layer (RNFL) thickness, foveal thickness, ganglion cell layer-inner plexiform layer (GCL-IPL) complex thickness and Parkinson's disease (PD).

Materials and Methods: Fourteen patients with PD and 21 healthy controls, totally 35 subjects were included in the study. Spectral-domain optical coherence tomography (SD-OCT) was used to measure the RNFL, foveal thickness, and ganglion cell layer-inner plexiform layer (GCL-IPL) complex thickness on each subject after ophthalmological and neurological examinations.

Results: Mean values of retinal nerve fiber layer (RNFL) thickness and foveal thickness were similar between the 2 groups. The mean RNFL thickness was 93.00±8.0 μm in PD patients and 95.42±10.2 μm in healthy controls (p= 0.379). The mean foveal thickness was 258.6±34.3 μm in PD patients and 254.0±31.3 μm in healthy controls (p = 0.895). Ganglion cell layer-inner plexiform layer (GCL-IPL) complex thickness was lower in subjects with PD than in healthy subjects (78.81±7.4 μm and 86.94±5.5 μm, p=0.001) respectively.

Conclusions: The average ganglion cell layer-inner plexiform layer (GCL-IPL) complex thickness was lower in patients with Parkinson's disease than in healthy subjects. The GCL-IPL complex measurements provided by OCT may be used in the diagnıosis of Parkinson's disease.

Key words: Parkinson's disease, ganglion cell layer-inner plexiform layer, optical coherence tomography

P -21

Intravitreal Bevacizumab in Patients with Central Serous Chorioretinopathy

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Aim: To evaluate the treatment of central serous chorioretinopathy (CSC) with either intravitreal bevacizumab (IVB) or only observation.

Methods: Medical records of CSC patients who received intravitreal bevacizumab (1,25 mg/0,05 ml) or only observation were assessed. Twenty two patients were eligible for the IVB group and 23 patients were eligible for the observation group. At baseline and follow-up visits, patients had best corrected visual acuity (BCVA), intraocular pressure (IOP) assesment, dilated fundus examination and optic coherence tomography (OCT) imaging. Outcome measures included central macular thickness (CMT) and best corrected visual acuity.

Results: All patients showed total or near total resolution of neurosensory detachment and improvement in visual acuity. At the final visit, although there was no significant difference in mean central macular thickness between the IVB injection group and the observation group (275 μm vs 284 μm, $p > 0,05$). Improvement of BCVA was better in the observation group ($p < 0,05$). No ocular or systemic complications related to IVB injection occured during follow-up.

Conclusions: There was no significant difference between IVB injection and only observation for anatomical outcome. In terms of functional outcome, observation was better than IVB injection. Further controlled studies will enlighten us about the use of anti-VEGF treatment in patients with CSC.

P -22

Dramatic Effect of Ranibizumab in Choroidal Neovascularization in Idiopathic Angioid Streaks

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P -23

The Association of Subclinical Familial Exudative Vitreoretinopathy with Rod-Cone Dystrophy

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P -24

Comparison of Interferon Alpha Versus Cyclosporine-A For Behçet Uveitis

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Purpose: The aim of this prospectively randomized study was to compare the efficacy of interferon alpha treatment and cyclosporine-A therapy in recurrent uveitis associated with Behçet's disease, which is refractory to conventional steroid therapy.

Methods: Fifty two Behçet patients with ocular inflammatory reactions that could not be suppressed, or had frequent uveitis attacks with classical uveitis treatment were randomly divided into 2 groups of 26 each with patients of similar ages, sex distribution and severity of disease. Both groups received corticosteroids according to standard protocol. At the beginning of the steroid therapy, interferon alpha was added 6 million IU per day subcutaneously with a total of 120 million IU to the patients in group 1; and cyclosporine-A (5 mg/kg/day) was added to the patients in group 2.

Results: The results were compared between two groups, according to remission period and attack number during follow up. Cyclosporine-A was efficient in all cases with a mean follow-up of 35 months (26-55 months) (Table 1).

The mean remission periods are 5.2 (±1.8) and 9.6 (±3.2) months in group 1 and 2, respectively. The numbers of acute episodes of uveitis during the follow up were 6.7 ± 2.3 and 3.4 ± 1.1 in group 1 and 2, respectively. The difference is clinically and statistically significant (p=0.001).

C*onclusion:* Many patients are resistant to conventional therapies for uveitis associated with Behçet's disease. Interferon alpha therapy has shown significant efficacy for common symptoms including ocular lesions without any serious adverse effects.[1] Sakane et al. reported that cyclosporin A is very effective drug for ocular lesions, but 20-30% of patients receiving cyclosporin-A had neurotoxic side effects.[1] Here we report that, cyclosporine-A is more effective than interferon alpha to elongate the remission period and to reduce the acute episodes, in refractory forms of uveitis in Behçet's disease.

References:

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P -25

Retina-choroidal thickness and retinal vessel caliber measurements in operated traumatic corneal perforations

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Objective: To examine the posterior pole retina and choroid of the eyes that underwent primary suturing due to traumatic corneal perforation.

Materials and Methods: This prospective cross-sectional case series included 42 eyes of 21 patients. The fellow eyes served as the control group. The macular thickness, peripapillary retinal nerve fiber layer (RNFL) thickness, choroidal thickness, and retinal vessel caliber (RVC) measurements were done by spectral domain optical coherence tomography. The examinations were performed at the intermediate phase (between 6 – 18 months from the operations).

Results: The mean RNFL thickness was 102.1 ± 10.9 μm in the perforated eyes and 99.5 ± 8.5 μm in the fellow eyes (p=0.06). The mean central macular thickness was 300.1 ± 25.6 μm in the perforated eyes and 295.6 ± 23.2 μm in the fellow eyes (p=0.27). The choroidal thickness and RVC measurements were also similar between the groups (p>0.05).

Conclusions: Properly operated corneal perforations do not cause important retina-choroidal problems in the late postoperative period.

P -26

Delayed resolution of serous macular detachment associated with optic disc pit after vitrectomy, laser photocoagulation, and gas tamponade

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Purpose: To manage serous macular detachment associated with optic disc pit with vitrectomy, laser photocoagulation to the margin of the optic disc and gas tamponade.

Methods: A 18 year-old female patient with serous macular detachment associated with a congenital optic pit underwent pars plana vitrectomy surgery, laser photocoagulation to the temporal margin of the optic disc, and C3F8 gas tamponade with postoperative facedown positioning for 1 week.

Effectiveness: Complete resolution of intraretinal and subretinal fluid, confirmed by optical coherence tomography, was observed within 10 months after surgery. The retina remained attached during a follow-up of 24 months and the visual acuity improved.

Take home message: Complete resolution of subretinal fluid secondary to optic pit after vitrectomy may occur several months after surgery. Physicians should wait before indicating reinterventions for persistent macular detachment.

P -27

Subfoveal choroidal thickness analysis using RTVue spectral-domain optical coherence tomography in healthy Turkish subjects

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Objective: To study the subfoveal choroidal thickness (SFCT) in healthy Turkish subjects by using RTVue spectral-domain optical coherence tomography (SD-OCT) with the use of enhanced depth imaging (EDI) technique.

Material and Methods: Four hundred and twelve eyes of 206 healthy subjects with no ophthalmic or systemic disease were examined with RTVue SD-OCT by using EDI-OCT technique. Eyes with high myopia (exceeding -6 D) or high hypermetropia (exceeding +6 D) were refractive were excluded. The main outcome measure was SFCT. Age, gender, refractive status were noted.

Results: A total of 412 eyes were included in the study. The mean age of the subjects was 45.03±13.00 years (range 10 to 69 years), 122 subjects (59%) were female and 84 subjects (41%) were male. The mean spheric equivalent of the refractive error (RE) was 0.15±1.05 D (range -4,00 to 4,00 D). The mean SFCT was 254.37±43.12 μm (range 122 to 426 μm). All subjects were grouped according to age in 10-year intervals. There were 24 eyes in the 10-19 years age group and the mean SFCT was 251.75±24.65 μm. There were 40 eyes in the 20-29 years age group and the mean SFCT was 259.12±39.36 μm. There were 50 eyes in the 30-39 years age group and the mean SFCT was 258.88±45.93 μm. There were 116 eyes in the 40-49 years age group and the mean SFCT was 258.11±43.86 μm. There were 142 eyes in the 50-59 years age group and the mean SFCT was 254.67±44.42 μm. There were 40 eyes in the 60-69 years age group and the mean SFCT was 233.67±41.21 μm. The mean SFCT in the 60-69 years age group was significantly lower than the other age groups ($p < 0.05$). The mean SFCT was not significantly different between the other age groups ($p>0.05$) and between the right and the left eyes (253.39±43.02 μm and 255.35±43.30 μm respectively, $p=0.645$). The mean SFCT was not significantly different between female and male subjects (254.75±42.99 μm and 253.82±43.42 μm respectively, $p=0.830$). There was no statistically significant correlation between the refractive status and the mean SFCT ($p=0.962$).

Conclusions: This study demonstrated the SFCT profile of the healthy Turkish subjects. The SFCT was significantly lower in subjects older than 60 years in comparison with the subjects younger than 60 years. There were no significant differences between subjects in terms of gender, side of the eye and refractive status.

P -28

Hypotony maculopathy after intravitreal dexamethasone implant (Ozurdex)

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Purpose: To present development of hypotony maculopathy after Ozurdex implantation in a chronic uveitic patient.

Materials and methods: We report a case of hypotony maculopathy after intravitreal dexamethasone implant (Ozurdex) in one patient who were treated for macular edema due to chronic uveitis.

Results: Following an uneventful intravitreal Ozurdex implant injection, the patient developed decreased vision and hypotony maculopathy. The intraocular pressure was noted to be 4 mmHg. Following therapy with topical 1% prednisolone acetate and 1% cyclopentolate during 1 month, the intraocular pressure normalized.

Conclusion: Chronic uveitis may predispose to hypotony by directly impairing ciliary body function. Therefore, the physicians should be more cautious in such cases and implantation should be performed by tunnel formation.

P -29

Subfoveal choroidal thickness changes after dynamic exercise as measured by spectral- domain optical coherence tomography

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Purpose: To measure subfoveal choroidal thickness (SFCT) in subjects after dynamic exercise, using enhanced-depth imaging optical coherence tomography (EDI-OCT).

Material and Methods: In this prospective study, nineteen healthy subjects performed 10-minutes of low-impact, moderate-intensity exercise (riding a bicycle ergometer) and then were examined with EDI-OCT. Each subject was scanned before exercise and after, within 2 minutes, at 5 minutes, 15 minutes and 30 minutes. Central retinal thickness, intraocular pressure, pulse rate, and blood pressure were also measured.

Results: Ten male and nine female volunteers, ranging in age from 23 to 33 (mean 27± 4.08) years old, were scanned. There was a significant increase in ocular perfusion pressure after exercise within 2 minutes ($p<0.001$) and at 5 minutes ($p<0.05$). Baseline choroidal thickness and central retinal thickness were measured at 344±64 μm and 245.78±12 μm, respectively. SFCT was significantly increased after exercise within 2 minutes ($p< 0.001$) and at 5 minutes ($p<0.001$) compared to the baseline measurement, while measurements at 15 minutes and 30 minutes following exercise were not significantly different compared to the baseline measurement ($p=0.349$ and $p=1.0$). There were no significant differences in central retinal thickness before and after the dynamic exercise at all minutes ($p>0.05$ for all).

Conclusion: Choroidal thickness increases after dynamic exercise but retinal thickness remains stable, suggesting that the retina is well-regulated during dynamic exercise.

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Evaluation of posterior subtenon triamcinolone injection in macular edema due to branch retinal vein occlusions

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Objective: To assess the effectiveness of subtenon triamcinolone acetonide (STA) in the treatment of branch retinal vein occlusion (BRVO)-related macular edema.

Materials and methods: Forty-one eyes of 41 patients with BRVO-related macular edema were included in the study. In addition to detailed eye examination, patients underwent fundus fluorescein angiography (FFA) and macular optical coherence tomography (OCT). Patients were treated with 40 mg STA injection under sterile conditions with a diagnosis of BRVO-related macular edema. Ocular changes 1, 3 and 6 months after injection were recorded. Obtained results were then compared statistically.

Results: Statistically significant improvement in visual acuity and macular thickness values was determined in the post-STA follow-up period. Intraocular pressure (IOP) changes were not significant, and antiglaucomatous drug use was required in only two cases at the end of 6 months. No other complications were observed apart from a rise in IOP.

Conclusions: Administration of STA may be preferred as an effective technique in terms of avoiding the potential side-effects of intravitreal injections in the treatment of BRVO-related macular edema.

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The Youngest Patient with Bilateral Keratoconus Secondary to Chronic Persistent Eye Rubbing

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We present the case of a four-year-old girl with bilateral keratoconus secondary to chronic persistent eye rubbing. She was referred to our clinic with intractable ocular itching and low vision. According to her family, she was generally rubbing her eyes. On slit-lamp biomicroscopic examination, bilateral papillary reactions were seen on the upper tarsal conjunctiva. Clinical examination and corneal topography were compatible with keratoconus. The patient's visual acuity was not evaluated because of cooperation difficulties. Systemic examination was normal. In fact, trauma may be the common underlying factor in eye rubbing and may cause development of keratoconus, even in the early years. To the best of our knowledge, this is the youngest patient with bilateral keratoconus secondary to chronic persistent eye rubbing in the literature. Keratoconus should be kept in mind in patients with severe ocular itching, even in small children.

Keywords: Bilateral keratoconus, eye rubbing, keratoconus

P -32

Bilateral papilledema and peripapillary retinal leukemic infiltration without cranial or optic nerve involvement

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P -33

Dural optic nerve sheath calcification associated with choroidal osteoma

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Objectives: To present a rare case of idiopathic dural optic nerve sheath calcification associated with choroidal osteoma.

Materials and methods: A 37 years old male with no remarkable medical history presented with blurred vision of gradual onset in his left eye. His best corrected visual acuity was 20/20 bilaterally and his intraocular pressure was 14 mmHg and 17 mmhg in the right eye and left eye, respectively. The examination of the anterior segment was bilaterally unremarkable. Fundus examination showed a yellow-orange plaque, located in the posterıor pole, with scalloped, well-defined margins in the left eye. Optical coherence tomography revealed little subretinal fluid and fluorescein angiography was negative for choroidal neovascularization which showed window defects corresponding to retinal pigment epithelial changes overlying choroidal osteoma. The computerized tomography scans revealed high reflective areas at the location of the ossified plaque and at the calcifications of dural optic nerve sheath. The automated visual field test was performed with Humphrey visual field analyzer (Zeiss) using the central 30/2 FastPac threshold program and refered as total deviation.

Results: The diagnose was idiopathic dural optic nerve sheath calcification associated with choroidal osteoma. We didn't suggest medical treatment or surgery for the optic nerve sheath calcification because it was closer to optical channel instead of glob. The choroidal osteoma did not require special treatment because it was not associated with neovascularization. Close follow up is recommended.

Conclusions: Optic nerve calcification is a rare finding associated with choroidal osteoma. To our knowledge this is the second case reported in literature. The mechanism of bone formation in choroidea remains unclear, intraocular inflammation was accused by other authors.(1) If the optic nerve sheath calcification is closer to optical channel instead of glob side, fenestration is not required. Patients also do not require special treatment for choroidal osteomas which are not associated with neovascularization and not disturbing the vision. Close follow up is important.

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P -34

Peripapillary retinal leukemic infiltration associated with bilateral papilledema in an acute lymphoblastic leukemia patient without cranial or optic nerve involvement

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Purpose: To present a case of bilateral peripapillary retinal leukemic infiltration associated with papilledema without retrobulbar optic nerve involvement in a patient with acute lymphoblastic leukemia (ALL).

Case Report: A 24-year-old male with T-cell ALL was consulted to our clinic for routine examination before starting chemotherapy. Best corrected visual acuity was 20/20 bilaterally with a color vision score of 11/20 in the right, 9/20 in the left eye. Fundus examination revealed grade 4 papilledema and flame shaped hemorrhages along the superotemporal arcades. Cranial and orbital magnetic resonance imaging were within normal limits, while opening pressure of spinal tap was 380mmH20. Histopathological examination was unavailable. There was no history of drug use associated with pseudotumor cerebri. Two months later, he presented with reduced vision: Visual acuity was 20/60 in the right and hand movements in the left eye. Grade 3 papilledema and peripapillary retinal leukemic infiltration were observed (FIGURE). Oral acetazolamide 3x250mg was started to reduce intracranial pressure. Repeated magnetic resonance imaging could not reveal any intracranial mass or optic nerve infiltration. Intravenous 1g methylprednisolone for 3 days was started and followed by 72mg oral methylprednisolone. Response to pulse steroid therapy was quick: The vision improved to 20/40 in the right and 20/200 in the left eye within 5 days. Papilledema regressed to grade 2 and retinal hemorrhages were started to disappear. Left relative afferent pupillary defect was noted. Final visual acuity was 20/40 in the right and 20/60 in the left eye. Papilledema was improved to grade 1, and majority of the retinal hemorrhages was regressed (FIGURE).

Discussion: Papilledema is a rare finding associated with ALL. In the literature, there are few cases reporting direct infiltration of the optic nerve by the leukemic cells, describing either cases with associated pseudotumor cerebri or papilledema due to a mass lesion in the brain. In our case, peripapillary leukemic infiltration was not associated with the optic nerve involvement. This lesion responded well to steroid treatment. Peripapillary infiltration of the leukemic cells was observed under the clinical picture of papilledema. It seems that papilledema facilitated retinal infiltration by altering vascular permeability. The reverse could also be possible: Leukemic infiltration leaded increase in vascular permeability and papilledema.

P -35

Effect of menstrual cycle on choroidal thickness in healthy subjects

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OBJECTIVE: To investigate the variations in the choroidal thickness (CT) during the menstrual cycle of young women using enhanced depth imaging optical coherence tomography (EDI-OCT).

MATERIAL AND METHODS: The study population included 28 right eyes of 28 normally menstruating women aged between 23-34 years, with regular menstrual cycles of 24-32 d. Every patient was assessed at the beginning of the menstrual cycle (days 3-5, follicular phase), during ovulation (days 14-16, ovulatory phase), and at the end of the cycle (days 25-28, luteal phase). Choroidal thickness was measured using spectral domain OCT (Cirrus-HD OCT, Carl Zeiss Meditec, Inc., Dublin, CA. The scan pattern used was HD 5 Line Raster spaced at 0,25 mm. Spherical equivalent, intraocular pressure, central corneal thickness (CCT), axial length (AL), mean blood pressure (mBP), the ocular perfussion pressure (OPP) were also measured. All measurements were taken within the same menstrual cycle.

RESULTS: The mean ± standard deviation of subfoveal choroidal thicknesses in the follicular, ovulation and luteal phases were 374.85 ± 57.24, 375.53±57.98 and 377.28 ±57.22 μm, respectively. We found no statistically significant changes in SFCT (Table 1) and biomechanical parameters during the menstrual cycle. ($p > 0.05$ for all). However, the measures of subfoveal choroidal thickness in the luteal phase were greater ($p = 0.059$) than in the follicular phase.

CONCLUSIONS: We conclude that hormonal changes provoked by menstrual cycle may not contribute to alterations in ocular hemodynamic. We presume this balance is maintained by heart rate, blood pressure, blood volume, cardiac output during the menstrual cycle. Some evidence seems to confirm that hormones do not play a role in choroidal thickness. If these ocular blood flow and choroidal thickness parameters do not vary with the changing hormonal levels during a menstrual cycle, these should not be considered when dealing with female patients.

P -36

Sticky silicone oil due to the interaction of perfluoro-octan and 5500cst silicone oil

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Purpose: To report a case series with the abnormal silicone oil adherence to the retina and/or posterior capsule in eyes that underwent vitrectomy.

Materials and Methods: Nine eyes of 9 patients (7 female; median age, 58) with rhegmatogenous retinal detachment with proliferative retinopathy or tractional retinal detachment from proliferative diabetic retinopathy underwent standard pars plana vitrectomy. All eyes were pseudophakic. Perfluoro-octane was used to flatten the retina intraoperatively. At the conclusion of operation, perfluorocarbon-air and air-5500cst silicone oil exchange were performed in 8 eyes while direct perfluorocarbon-5500cst silicone oil exchange was performed in one eye.

Results: Eight eyes demonstrated sticky silicone oil to posterior lens capsule that was noticed at very next day of operation. They were all managed by performing surgical capsulotomy during silicone oil removal about 3 months after vitrectomy. Ninth eye showed extremely adherent silicone oil to the macula that was noticed during silicone oil extraction. Despite all attempts, a huge sticky silicone oil bulk could not be removed from the retina. Sticky silicone oil completely freed from the retina spontaneously at 1 month. All eyes have flattened retina at the last follow-up.

Discussion: Extremely adherent silicone oil to retina or posterior lens capsule was observed in 9 eyes after vitrectomy. Possible chemical interaction of perfuoro-octan with 5500cst silicone oil may be responsible for this phenomenon. No extreme effort is necessary to remove the sticky silicone oil from retina as it frees over the time while silicone oil sticky to the lens capsule can easily be managed by performing a capsulotomy during silicone oil removal.

P -37

Unilateral retinitis pigmentosa: a case report.

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Objective: Unilateral retinitis pigmentosa is a rare form which shows typical retinitis pigmentosa findings (bone spicules pigmentation in mid peripheral zone, retina pigment epithelium atrophy, waxy palor of optic disk, attenuation of retinal arterioles) in the affected eye and total absence of any signs or symptoms of retinitis pigmentosa in the fellow eye. In this case report the purpose was to emphasize the highlights in diagnosis of unilateral retinitis pigmentosa.

Materials and Methods: In this case report the patient studied by full field electroretinogram, fundus autofluorescence and optical coherence tomography after his ophthalmologic examination.

Case: 25 years old male patient admitted with complaint of loss of vision in the right eye existing since childhood. Biomicroscopic and ophthalmoscopic examination revealed posterior subcapsular cataract and typical retinitis pigmentosa findings (bone spicule pigmentations, waxy palor of optic disc, attenuation of retinal arterioles) in the right eye and examination of the left eye was totally normal. Full field electroretinogram, fundus autoflorescence and optical coherence tomography were pathologic in the right eye but there were no pathologic findings in the left eye.

Results: The patient has a compliant of loss of vision since childhood, has no ocular trauma, enfection etc. history and no pathological findings in the left eye during the period still has not found. In accordance with the present findings and medical history, we have concluded that the diagnosis of unilateral retinitis pigmentosa would be appropriate for this patient. But also we considered that long term follow-up required for the definitive diagnosis.

Conclusions: Unilateral retinitis pigmentosa is a rare disorder and for definitive diagnosis other possible ocular and systemical pathologies must be excluded, the unaffected eye must be totally normal. Also at least 5 years follow-up is required for both eyes to exclude the possibility of asymmetric retinitis pigmentosa, especially when medical and family history of the individuals who provide insufficient information for diagnosis. Electroretinogram and visual field examinations used for the diagnosis since old times as well as optical coherence tomography and fundus autofluorescence provides useful informations about retinal degeneration level and diagnosis.

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Purtsher's retinopathy: report of two cases and review of the literature

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Purpose: To report two cases of Purtscher's retinopathy.

Methods: Two patients with Purtscher's retinopathy were reported. They underwent complete ocular examination including fundus examination, fluorescein angiography (FA), indocyanine green angiography (ICGA), and optical coherence tomography (OCT).

Effectiveness: Patients were aged 44 and 29 year-old, respectively. There was history of acute pancreatitis for the first patient and chest trauma for the second patient. Ophthalmoscopy revealed unilateral multiple cotton wool spots and retinal hemorrhages surrounding the optic disc in both cases. FA revealed multiple zones of hypofluorescence with areas of capillary non-perfusion. ICGA angiography showed multiple areas of choroidal ischemia in both cases. OCT showed serous retinal detachment of the macula in one case.

Take home message: Purtscher's retinopathy is a retinal vasculopathy most commonly caused by head or chest trauma. Visual outcome in Purtscher's retinopathy is variable and there is no well defined treatment.

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Comparison of Choroidal Thickness in Diabetic Patients by Spectral-Domain Optical Coherence Tomography

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Purpose: To investigate macular choroidal thickness (CT) in diabetic patients with and without diabetic retinopathy (DR).

Methods: Ninety-four subjects were enrolled: 62 diabetic patients and 32 normals, as controls. Exclusion criteria were previously treated DR, refractive error higher than ±3 diopters, and treated or untreated glaucoma. All patients underwent full ophthalmic examination and spectral domain optical coherence tomography (OCT). All measurements were performed independently by 2 masked graders. The participants were grouped according to diabetic retinopathy grade: no diabetic change, mild-to-moderate or severe non-proliferative or proliferative diabetic retinopathy.

Results: Mean age was not significantly different between patients with diabetes and controls. The subfoveal choroidal thickness was thinner in eyes with non-proliferative or proliferative diabetic retinopathy than in normal eyes ($p < 0.01$). However, there was no difference between eyes with non-proliferative and proliferative diabetic retinopathy or between eyes with no diabetic change and the controls. Eyes with macular edema showed no significant difference in choroidal thickness compared with eyes having normal macular contours.

Conclusion: Choroidal thickness is reduced in diabetic eyes and parallels appearance and evolution of DR. Diabetic macular edema did not influence CT. The role of choroid in the pathophysiology of DR needs to be adequately investigated.

P -40

Efficacy of Intravitreal Ranibizumab (Lucentis®) Injection for the Treatment of Macular Edema Secondary to Branch Retinal Vein Occlusion

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Purpose: To evaluate the functional and anatomical results of intravitreal ranibizumab injection in eyes with macular edema secondary to branch retinal vein occlusion.

Methods: Thirty-two eyes of 32 patients with macular edema secondary to branch retinal vein occlusion were treated with intravitreal ranibizumab injections (0.5 mg/0.05 ml) and enrolled in the study. These patients were evaluated with logMAR visual acuity, biomicroscopy, intraocular pressure, and optical coherence tomography results before the injections, and follow-up examinations (1,3 and 6 months).

Results: Thirty-two eyes of 32 patients with a mean age of 64.4 years (56-79 years) were studied. Mean follow-up was 8.32 months and mean injection number during this period was 3.64 for these patients. The mean logMAR visual acuity was 1.04±0.4 before the injection, while it was 0.80 ±0.4, 0.78 ±0.5, 0.76 ±0.4 at the 1 month, 3 months, and last control, respectively. There was a statistically significant visual acuity improvement during follow-up ($p<0.05$, Wilcoxon signed-rank test). Central macular thickness obtained by optical coherence tomography scans was 521±146 μm before injection, was 400.4 ± 136.2 μm at 1st month, was 342±119 μm at 3rd month and was 297±131 μm at 6th months, respectively.

Conclusion: Intravitreal ranibizumab injection seems to be an effective treatment modality in eyes with macular edema secondary to branch retinal vein occlusion. However, long-term studies, with a larger number of patients, are needed to examine the permanency of this anatomical and functional recovery.

P -41

Choroidal Thickness and Duration of Diabetes

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Purpose: To evaluate changes in macular choroidal thickness in eyes without diabetic retinopathy of patients with various durations of diabetes, using enhanced depth imaging optical coherence tomography (EDI OCT).

Methods: The 60 Type-2 diabetic patients who presented without diabetic retinopathy were prospectively imaged using EDI OCT. The patients with diabetes were classified into three groups, according to the duration of diabetes: Group I (2-9 years, n = 22); Group II (10-14 years, n = 21); Group III (15-25 years, n = 17). The retinal and choroidal thickness was evaluated between these groups at central fovea.

Results The central foveal retinal thickness was significantly different between groups (group I: 284.05 ± 20.34 μ, group II: 277.12 ± 21.68 μ, group III: 266.56 ± 23.24 μ). The choroidal thickness measurements were not significantly different between groups (group I: 285.05 ± 22.42 μ, group II: 288.12 ± 23.78 μ, group III: 279.56 ± 24.32 μ).

Conclusion: Foveal retinal thickness was significantly decreased in patients with longer duration of diabetes. However, duration of diabetes does not seem to be related to foveal chorodial thickness. The role of choroid in the pathophysiology of DR needs to be adequately investigated.

P -42

Bilateral serous retinal detachments after recurrent flu-like symptoms

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P -43

Evaluation of retina-choroidal vasculature and ocular pulse amplitude in patients with polycythemia vera

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Objective: To compare retinal vessel caliber, choroidal thickness, and ocular pulse amplitude between patients with polycythemia vera and healthy adults.

Materials and Methods: A total of 80 participants (40 patients in polycythemia vera group and 40 age-sex-matched healthy adults in control group) were recruited for this prospective cross-sectional study. Spectral-domain optical coherence tomography was used for subfoveal choroidal thickness and retinal vessel caliber measurements. The Pascal dynamic contour tonometer was used for ocular pulse amplitude and intraocular pressure measurements.

Results: The mean age of the study group (23 male, 17 female) was 58.8 ± 11.1 years and the mean age of the control group (23 male, 17 female) was 58.0 ± 7.1 years ($p=0.72$). There were no statistically significant differences between the study group and the control group in the aspect of retinal vessel caliber, subfoveal choroidal thickness, ocular pulse amplitude, and intraocular pressure measurements ($p>0.05$).

Conclusions: Retinal vessel caliber, subfoveal choroidal thickness, and ocular pulse amplitude parameters were similar between patients with polycythemia vera and controls, indicating that retina-choroid is protected from systemic hematological threats to some extent.

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Case report: Post-traumatic Retinal detachment with multiple laceration in the posterior segment

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It's shown a particular casee of haemorrage and emovitreus after a trauma due to a soccer ball. After few days the vitreus gets clear but a retinal detachment occured with multiple hole in the posterior segment. It's shown the surgery of the post traumatic retinal detachment.

P -45

Is fellow eye appropriate to set as control in retinal ischemia reperfusion injury model

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Objective: Ischemia develops because of a disturbance of the blood supply to the tissues but the damage inflicted during the reperfusion is much greater than the ischemia itself.[1] Ischemia reperfusion (IR) injury results in both local and a systemic inflammatory response that, in turn, may result in altered tissue barrier function.[2] Some studies performed to evaluate ischemia reperfusion injury in rat retina models, had a tendency to set the fellow eye as the control group.[3, 4] We tried to demonstrate the histological changes in the fellow eye retina in retinal ischemia reperfusion injury.

Materials and methods: 24 male Wistar-Albino rats weighing approximately 200-250 mg were kept in a stable environment at a constant room temperature and humidity. Selenium treatment group (n=8) received 7 days of 0.5 mg/kg intraperitoneal sodium selenite and received IR injury via increasing intraocular pressure to 110 mmHg for 60 minutes. Sham group (n=8) received IR injury with same method without any treatment. Control group (n=8) is the group without any medication or intervention. All eyes were enucleated 24 hours after the IR injury and the specimens were fixed in 10% neutral buffered formalin. Sections were stained with hematoxylin-eosin (H&E) and terminal deoxynucleotidyl transferase dUTP nick end labeling (TUNEL) stainings.

Results: IR injury resulted in increased infiltration of inflammatory cells, retinal thickness in sham (228.7±13.1μm) and selenium treatment (156.7±5.5 μm) group compared to control group (143.9±4.2 μm). The increment in retinal thickness was statistically significant in only the sham group ($p<0.05$). Compared to sham group, selenium treatment significantly alleviated the damage and limited inflammation and thus increment in retinal thickness and apoptosis in the IR induced eye ($p<0.05$). We demonstrated that IR injury also had resulted in significant inflammation and increased retinal thickness in fellow eye of the sham group (166.72±9.7 μm) without any apoptotic changes ($p<0.05$). We also noticed that this inflammatory change and increment in retinal thickness is absent in the selenium treated group fellow eyes (144.0±5.5 μm).

Conclusions: IR injury also caused inflammatory changes and retinal thickness increment in the fellow eye. Selenium treatment effectively annihilates these changes in both IR induced and fellow eye. The fellow eye is not suitable to set as control eye since it is also significantly affected from the IR injury.

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Intrvitreal dexamethazone implantation for resistant cystoid macular edema due to retinal detachment surgery: case report

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